

# SEQUENCE LISTING

## SEQ ID NO. 1

ATGGGCACTACCCTCGAGTGCATCATCTGTCTTGGACAGCCGAGTTTTCAGCGATGTCTCCACCTGTTGAC  
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 5 TCAAGCTTCTCGAGCGATACGACCACTGGTTTGTATAACAATGGCTTCGCGAAGCTGCTGTCTGCTCGCATG  
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 CCAAGCATCCATCGTGGAGACCGAGGGCTCCAGCACTCCTGCAATGCCAGCCACCCCAACCCTGATTACC  
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 10 CCAAACCAGTTGCCCTACGGCGAACAGCAGTGCGAAAACCTGGAAGTGGTCCGACCCCTCCGCTTGTGCGATC  
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 15 CTGTGCAGATGCGTCGTGCGCGCAACCAGAAGAAGGACAGTGGTGTACTGAAGACCATGGAAGAAACTTCC  
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 20 GTGGCTTCGACGTTTTTGTGATGAGAGAAAGGAAGAAGAGGACAGCAAAACAACCTTATCAGCAACCGGGA  
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 25 TCCCTCGAAGCACCCCTTCTATGAGAGCCAGTATGAAGAGGAGCATACTGCAGCCCAGAATGGCTGGCTTC  
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 TCTACCGATGTGAAC

## SEQ ID NO. 2

MGTTLECIICPGQPQFSDVSHLLTHAASKAHLANHFKLKLRTDDPNSVKLLERYDQWFDN  
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 SDLYDESQSLALPKTPIQRLHEPGPLETTLITNEDTPDPFVDSGDQTQASAEAEEMDKTRA  
 EEISRLKGVLYPGMDIFDSATVQMRRRRNQKKDSGVLKTMEETSLLEPSEQVYSPGGTL  
 35 LTERMITGNVEDYSPLKGETPIPKGGLTRTRSTRLTADPNVSRAADRKRQKTDKDRKNM  
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 40 NGWLPVDQIVPSDVTIPEDDQIFPTYYFSTDVN

## SEQ ID NO. 3

ATGGCACTAATCACTCGCAAATACGGCGAGATCCGCCAGATCACAGGCCTGAGCGACCACGCTGTGATCCT  
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 CCGGTCAGAGCACGGACGAGTACACAAAACAAGTCAATGCGGAGTTCGCCGTCGTGCCAATCTGCACCAC  
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 50 CGTATCTTGCCCCGAGCGATACCTTGACGAGGGCGACAGGTACATGTCCAGATCCGACCCAGAGCCCTC  
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 GAAGGACGAGGGCTTCAGGGCGTATGTGCAAGAGCGTAAGGCCGAGAAGACGAATACTGTTATCCAGGATT  
 CGTGCCATGAACGGGGCCGCAAAGTGATATACGCCATGTTAAGCACTGATCCTGGGAAGCGACCTATCGCG  
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TAATGGATTTTCGGCC

**SEQ ID NO. 4**

MALITRKYGEIRQITGLSDHAVILQSHKVQYCPPLDRYYAIKVFRSPGQSTDEYTKQVNAEFVAVNLHH  
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PENLLLTHRACLKISDFANAERVRFDDDSQHANDLAETERRSLEPTPYLAPERYLDEGDRYMSRSDPRAL  
DIWAAAVIYVAMRTGRNLWKAATEKDEGFRAYVEERKAECTNTVIQDSCHERGRKVIYAMLSTDPGKRPIA  
TEILSSEWLQNIIDCCIFDHSQAESNGFSA

**SEQ ID NO. 5**

ATGACTGAGCGCTCAGTTCAGATCTGGTTTCAAAACAGGCGCGCAAAGATCAAGATGCTTGCGAAGAAGAG  
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GAGCCAACACCTTCAGGCAAAGTTGTGATCCATCACTTTACCTGTGATCCCTGACAATTGGCAGCTGGAG  
GCGGATCGGACAAAATGCCATGGACCTGGTTGTTTCTACTCCCCCGAGAAGGCGTGCATGACCTACTATA  
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TTCGGGAATATACGCGCCTATACCCAGTCGACACACTCACTTGCTGCGAACCTCCGCATTGATACCTCTT  
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AATGTTTTGACTCCCGGCTCT

**SEQ ID NO. 6**

MTERSVQIWFQNRRAKIKMLAKKSIETGEGCDSIPESMRQYLAHQFDPSPKPGARDPFGRITGGYGANGAYPN  
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GDQGPQNGAPPRPTGLVVELNRPPLFYMDSSNSGGFFYQCGDFTEDQQASSVMIHRLGGHPKVLVSVQLAKL  
VSLESFQNRLAYGNFPANNSMSPFFIQRPASQPNQFAPAFMSMYAENPAVMNLQAARGHKRQRSRVPVAI  
DFSALGAPMTQFSMPQAQFSDADSGIYAPIQSTHSLAANLRIDTSSGYAFDPRAHPMSATTTASPSDFA  
SPALEFSAGPQGDSTPVGSVGAQFTLPYVSPAVDGVSQAASPYNSVSHVDPMIANHSPLTNMSHTPHDV  
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NVLTGPS

**SEQ ID NO. 7**

ATGGATCCTAGAAACCATCCCTCTCGGCCTCCGTCTACCAGTCTGCCTCAAGGATCGGCGCCTCTTCCTTC  
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CGGCCTGATCTGAACAGGTACCCCGCATCAAGTCACGATGTTTACGCGTCTTCTGCTGCGCCGATAATGCC  
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CAGCCAATTGCGCCGGCGCCTCCCCGGGACCGTCTGTGCTGACTTCAACAATGGACTTCCTTCAGGAGCATT  
CAGTTATTCGGACGGAAAGCCTCAAGGTTGGGACCCCGTTGCTGCGAATGGTGTGCGCCGTATCCCGGGA  
AGGACTCCCCCGAACCAGGTTGTTGGTTCTCAGGGGCGACGCGGTATCCTTCCGAGTGTTCGGGACCG  
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AAAGTTCCCTTGCCCGAAGTGTAAACGACTTATCTTATGCCAAGCATCTCAAGCGCCATCTGCTACGCC  
ACACTGGTGACCGCGTACATGTGTTCTTTTGCAAAGACACCTTCTCTCGCAGTGATATCCTGAAACGT  
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TGTGAAGAGGTCCCAACAGCAGGCTGCGGCGAATCCTGTAAACCTGTCCAGGATGAAGTCAGTAGTACCG



GGGTCATACGGGAACCTTGGATAACAAGAACGACTTTGAGGATATCAACCAATTTCTGAACACACAGTTGGA  
GATTACGTCG

**SEQ ID NO. 12**

MTARQSTPSSDNSHSDSGVRKRVCKACDRCLKSKCDGAKPCGRCRADNTLCVFGERKKAHDKVYPKGYV  
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WKRNAGHMQRQDSSDTSSESPQSPVMPSPQFSDPFVSVRTVPQTPTTISPNTTLRIDVPQSATKSEPMQTS  
SIYTTAVSMPRVVDPSSELQSAQIANPQWPSPGFGGYDEMDLMSGQYNGLPYEDAISSPMFRNRPMPMGCLIP  
GSYGNLDNKNDFEDINQFLNTQLEITS

**SEQ ID NO. 13**

ATGTCGCAGCCCATCGCCTGCCCTCCAATGGAGCACTCGCCCTCCTCCTTGTCCTCCTACTCCTCTTACTC  
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GTGGCCGTGGACACGGCGCCAGCCCCGGCACAAGCACGGGTCCCGGCAGCGTCGTCGATTTCCCGTTCAGC  
CAGCAATCGTTCGATTTTCGAGCCTTCGTGCTGGACAGCAATGGCCCCTACTTCGAGTTCGAACCCGACTTT  
CGTATACACACCCGAGGCGTTTCCCGTCATGGACGCCCGACCTCCTACCCGGCGAGCTCGAACCCGGCCT  
GGTCGCCAACCTCCATGCTTGTGCGAGCAGTCGATATTTCTCTCGACGGGCTTAGCCAAGAACCCAGTCAAG  
CCAGCCAAACCTACAGCTGCGAAGATTGCGGCAAGGCCTTCACCCGCCAGCGGACCTAAAGCGCCACCA  
TAGCACTGTACACTACCCGGTTTTCCAGAACTGCCCTGTACCGGACTGCTCGCGCAAGGACAACCATGGCT  
TTCCGCGGCGCGACCACTCGTCGAGCACCTGCGCTCGTACCACCACATGGATGTGCCGAAGCGGCGCGCA  
GCAAAGCGATTGAGAACTGTT

**SEQ ID NO. 14**

MSQPIACPPMEHSPSSLSSYSSYSPSSSYSAVSDSGMSMLDMYFLHGGRGHGASPGTSTGPGSVVDFPFS  
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PAKPYSCEDCGKAFTRPADLKRHHSTVHYVPVFQNCVPDPDCSRKDNHGFPRRDHLVEHLRSYHHMDVPKRRA  
AKRLRTV

**SEQ ID NO. 15**

ATGCTTGCGCAGAATAACATCCAGAACCAGCAGCAGCAGCAGATGATGCAGCAGCAGCAGCAGCAACAACA  
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AGATGATGCGCGCGCAACTCATGAGATGCAGCTCGCCCAACAGCAGCAGCAACAAAGGCAACAGCAATCA  
CAACAGCAGCAACAAGCGCAGCCGCAAGGCCAGCAACAGCCACAGCATCAACAAGGACAAATGCTTCAAAA  
CAGCCCTCAGCTCAACGCCCAGCAACAGCAGATGTTGATGGCAGCGGCACAAGCTAACCGCGGCCAACTCC  
CGCAAAACATGCAGGGCATGGGTATGCAGCCGCGAATGAGTACTCCAGCGCGGTACAACCAGCTCTATCAG  
CAGCGGCTTTTGAGACTACGGCAAGACATGGCTACGCGTCTGATGCCACAGTACGGACCACCCACGCAATA  
TCCGCCACAGGTTGCGCAGGAGTACAGTGTGGCCTTGAAAACGCTGCTAAGGGCTTCGTGCAAGACCTCA  
TTCGCAGGGAGCGTGTGAGTTTGTGCTGCTCAACAGCGACAAGCCCAGGCTGCTGCCACGCCCAGGCA  
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**SEQ ID NO. 16**

MLAQNNIQNQQQQMMQQQQQQQQQQQQNHQNNQQQKFANPQAYQAQMMRAQLMQMQLAQQQQQQRQQQS  
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QRLRLRLQDMATRLMPQYGPPTQYPPQVAQEYSVGLENAAKGQVQDLIRRRERVEFAAAQQRQAQAAHAQA  
VQQQQHNMNQNGMGK

**SEQ ID NO. 17**

ATGAACAACGACTTCATGCAAAACAACATTCGCAGCGCCCAGGATGTGGAACAGATTATTTCCAACATCCG  
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CTGGACTCCGTGCTCAGGGAATTCGCTACGCTGTTGATGAGGTTTCGAGATCCCCATTTGGACGTGGTGC  
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ACCCTAGCATTGGTGGCCTGATCGACTGCACCTCCAACCTTTGAAGTAGAACAGGATGAGATGTCCCGTGCT  
AACCCACCTGTGCATCTGACTCGTGAGCTGTGGTGCAGCAAACTCATGCTCGGCTCTATCGATTCTCGTA  
CGATACCAAGGACGAGAGGGGTAGTGGCCCATCTGGTGTCTCCTCCTGGGCCTCCTCCTGGCCAGTACGGCG  
GCTATGGTCAGTCAGGACCGGGATACGGCTCATCCGACCATAACAATCCCGCCAGCAACAGCCGTACAGC  
CCTGCTTACCCCCCGCACAGCCAAGCGCCTGGAGGCTATGCACAGCCACCTCCCCAAGGCCAGTACGGCGG

CTATAGCCAACCGGGCCCGGGATATGGCTCACCCGCGCCTTACAGCTCCGGACAACAACAGGGGTATGGCT  
CTGCTCCTTACCCACCGAGCAGCCAAGCGTCTGGGAGCTATGGCCAGCAACAATATGGACAACGGCCCCGA  
TCTCAGCCTGGTTATCCCGGTCAACAGCCTCCGTACGGACAGCAGCCGAGGTAT

# SEQ ID NO. 18

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NPPVHLTRELWCAKIMLGSIDSSYDTKDERGSGPSGAPPGPPPGQYGGYGQSGPGYGSSAPYNPGQQQPY  
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# SEQ ID NO. 19

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CCGGGCTACACCAACCTACTCAACCTCTATGGGAAGTTCCATGCACCCTGAAATGTCCCATGGTCAAGGCC  
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GCCCCCATACCCTCAACATATCCCTACAGTGCTCCAACCCAGCCTCCTGTGACTTCTGAGGTCCACCCTT  
CATATACTTACGCCAGCTCTGGCTATGGTTTCGAGAATGGGCGAAACAATGCCCCCTCGGTACCCTGGTCTT  
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# SEQ ID NO. 20

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ATSSPSYSNAPSYPSNHSGFGSGQPPYPQHIPYSAPTQPPVTSEVHPSYTYASSGYGFENGRNNAAPRYPGP  
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# SEQ ID NO. 21

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CCGCCCTCCTCTACTCCACAAGCTACTACGACTATCTATTTGCGACGACAGTACTGCTCATGTACCGACCG  
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CCGGCATCACGATCCTGTGGTGTCTGCATCAGAATTTGCGCGGATACAGGACGGTCAAGCGCCACCCTGG  
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CTCCACCTTCACCCACACATTTCCGCTTCGAACAACAAGATGGGAGTTTTCCGTATAACTCCGAAATGAA  
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 5 ATCTGCCTATGTCCCGTATCCTAAACAGAATCAATTAACCTCCGAGAAAGACGACACGAATTTCTACAGCTG  
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 CGCAACAACAGAATAGGCATGTCATGCCCCAGGCGAATGGAGTCAGTCAGGCACCACAGTCATCGCCTGTG  
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 20 TCCCATGAGCATGAGTCTTCTATGCAAGGCTGCTGAAGCCCTCAGAGGCCCTCCATCAGCGCTACAGCACG  
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 25 CAGCAACTCCTGGCGCAGCAAGGACATCTCGGTGATGGCCAGCTTACTCCGCAACAGTACGCTCAGTTGCA  
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 AGCAACAGCCAAAGATACCGAATCAACAGGCCTATCAAAGCCAGATGATGCGTGCGCAGCTCGCGCAGTTG  
 CAGATGGTCCAGCAACAACAACAGCAGCAGCAGCAGCAGCAGCAACAGCAACAGCAACAGTCCAGGG  
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 30 AAGCCAAACAGCGGACATCCACCGCAGAACATGCAGGGAGTAAGCATGGCACAAGGTGCTATGGCGCAGCGC  
 TACAATAACATGTACCAACAGCGCTTGCTACGGTTGAGGCAAGAAATGGCGTCCAAGTTGATGCCCCAGTA  
 CGGGCCCCCGGGGAGTACCCACCGCACCTTTTGCAAGCAATACCATGCTGGGCTCGAACGGAACGCTAAGG  
 CCTGGGTGAGCGATATCATCCGCCGAGAGCGTGAGGCCGCACAGCAACAACGAGCGAACCAGGTGCTGCC  
 35 GTGCAAGCGCAAGTCTTGACGAGCAACAGCAGCAGAACATGATGCAGAACGGCATGGGCAA

SEQ ID NO. 26

MPGVDKMATAISQPTSHPPKMKRPPPPFVQTGVNGVKAQQSSSSPQSASKRLPGAGQTSSATSMAGTTANG  
 INGTTDAKGPLNRPKRDAPKPGAAGRLQKLQSRRTSTDLGQRSSKQCAEPYVKTTNYILKKYSKPPSLV  
 40 LHLHPTHFRFEQQDGSFPYNSEMKVIEHLRAGTVPHIEIIEELLRANIRFYEGCLIVRVIDHKSVSQAARK  
 TTAHSSNENNTPFISIHNNEHITPSAYVPYPKQNQLTSEKDDTNSTAGNQADAPNGEQSASAKDQDGS  
 QQNEAPSKPRVFTTVLHPTPRSLQAEITLLATTPARTSPANSTTRTQGASMAPPSPGGSNTQLDRGHVAKK  
 QKMMVEPADLPECESRLTRALAPPLFLDPVDSFDAQDLLRHMESPLHMDPPSPKRRKRRTVAELA  
 45 AAEERFMLIMDERLEPNGPGGAGGPKAAAVDDTGGGAPFEPRFSRFTLENIRMQHEEKAKREHEIKLKQ  
 ELAKRQQQEQRERRRALEQRQAEEHAKDEARRQHLAAQQQAQQLAAQQQNRHVMAQANGVSQAPQSSPV  
 VRNQTPHNTSSPLVGNAMGTQAGVPMSMTSSMQGAGSPQRPPSALQHAHPNLMShPMAASRSQQGPSRIHT  
 PQMTQGTpAMSHATPIMRNVPTQRMShASPGRSTMAPTPVMNQAMMGTpQMAGGMGLTPQQQQQMLMQQR  
 QQLLAQQGHLGHGQLTPQQYAQLQANAHAAQSIQSHPOHMMQAQQQNQQQPKIPNQAYQSQMMRAQLAQL  
 QMVQQQQQQQQQQQQQQQQSQGQQAHVHQGSPQMNPOQQMMMAAAQANSQHPPQNMQGVSMAGGAMAQR  
 50 YNNMYQQRLLRLRQEMASKLMPQYGPQGYPHLLQQYHAGLERNAKAWVSDIIRREREAAQQQRANQVAA  
 VQAQVLQQQQQQNMMQNGMGK

SEQ ID NO. 27

ATGAACCTACCTACACCAGCCGTACCAATATGTCGCCCATCCAGGCATCCCAATGGACCAGCCTATGTCTT  
 CGACCCGACCATGGGTGTCATCCGGCCATGATGCACCCCATGGACGGCGGTTATCTCTACCAACATCCGCCGT  
 55 TCGACATGGTCGACTTCTACCCCATCATGGACTACGAGGAATACGCAGAGAACCTGTCCCGTCCGATATTG  
 ACCAAAGAACAAGTCGAGACTCTCGAGGCCCAATTCAGGCTCATCCGAAGCCCAGTAGCAACGTCAAGCG  
 CCAATTGGCCGCTCAAACAAATCTCAGTCTTCCCCGAGTCGCGAACTGGTTCCAAAACAGACGGGCCAAAG





ATGCCGCCACCAGCCTCTGCAGTGGATTCTCTGAATCTACTGAACCCCCAAGGCAACGCCACCTCTTCCAC  
 TCCTTCGACTCCCGTGGACAGCTCCAAGGCGCCGTCCACTCCTACCAGTGCTCAGTCTAACACGAGTATGG  
 CCTCATCGGTGAGCCTCCTCCCACCTCTCATGAAAGGAGCGCGCCCGCCAACGAAGAAGTCCGCCAGGAT  
 CTTCTCGCCCTTACAAGTGCCCCCTCTGTGACCGTGCCTTCCACCGCTTGGAACACCAGACCAGACACAT  
 5 CCGCACCCATACGGGTGAAAAGCCGCACGCATGCCAGTTCCCGGATGCACGAAGCGCTTCAGTCGCTCCG  
 ATGAGCTGACGCGCCACTCCCGGATCCACAACAACCCCAACTCCCGACGCAGTAACAAGGCGCAACATCTG  
 GCCGCCGTGCTGCTGCCGCCGCCGCGGGTCAGGACAATGCGATGGTCGGCGCCCCGGCAGGGGCCATGAT  
 GCCTCCTCCCAGCAAGCCCATCACGCGGTCCGCCCCCGTCTCGCAGGTGGGATCCCCGGACGTGTCCCCGC  
 CTCATTTCGTACTCCAACCTACGCCGGTCACATGCGGTGCAACTTGGGACCGTATGCCCGGCACGGCGAGCGG  
 10 GCGTCTTCGGGCATGGATATCAACCTCCTCGCGACCGCTGCCTCGCAAGTCGAGCGCGATGAGCACTACGG  
 CTTCCACGGTCCCCGTGGTCACCCGTTCTTTGCGCCCCGTATCACGGCGGCACCGGTCTGCTCCCGTCCG  
 TGTCGGCCTACGCGATCTCGCACAGCATGAGTCGCTCGCATTCACACGAGGATGACGATGCTTACACGCAG  
 CATCGCGTGAAGCGCTCCCGCCCCAACTCCCCCAACTCGACCGCCCCCTCCTCTCCACCTTCTCGCACGA  
 TTCGCTTTCTCCACGCCCCGACCACACTCCGCTGGCGACCCCTGCCATTTCGCCGCGGCTGCGGCCCTCTGG  
 15 GTGCCAGTGAATGCATCTGCCTTCGATTTCGCCACCTGTGCTCCATCACACGCCGGCGCTCGCGCCCATG  
 GAGCCCCAGCCGGAGGGCCCCAACTACTACAGCCCTGCCAGGGTCACGTGGTCCCAGCATCAGCGACAT  
 CATGTCGCGGCCCGACGGCACCCAGCGCAAACCTCCCCGTCCCTCAGGTGCCCAAAGTGGCCGTGCAGGACA  
 TGCTGAATCCGGCGACGGGATTTTCGTCGGTGTCTCGTCGACGAACAACCTCCGTTCGCGGGTGGCGATCTG  
 GCAGACCGTTTC

**SEQ ID NO. 32**

MPPPASAVDFSLLNPQGNATSSTPSTPVDSSKAPSTPTSAQSNTSMASVSLPLPLMKGARPANEEVRQD  
 LPRPYKCPLCDRAFHRLEHQTRHIRHTHGEKPHACQFPFGCTKRFSRDELTRHSRIHNNPNSRRSNKAQHL  
 25 AAAAAAAGQDNAMVGAPAGAMPPPSKPI TRSAPVSQVGS PDVSPHSYSNYAGHMRSNLGPYARHGER  
 ASSGMDINLLATAASQVERDEHYGFHGRGHPFFAPRHGGTGRLPSLSAYAI SHSMSRSHSHEDDDAYTQ  
 HRVKRSRPNSPNSTAPSSPTFSHDSLSPTPDHTPLATPAHSPRLRPLGASELHLPsirhLSLHHTPALAPM  
 EPQPEGPNYYSPAQGHVGPSISDIMSRPDGTQRKLPVPQVPKVAVQDMLNPATGFSSVSSSTNNSVAGGDL  
 ADRF

**SEQ ID NO. 33**

ATGAATCCCGCAAACCTTCAACGTGGGCGGCTCCATGCCCGCCGCGCCACCCCCAGATGCCGAGACTCGA  
 CAATAACCAGGTCATGATGAACTATGTGCCCCAGGCTTTACATGCACAAGGCACCTATACCGGTTGGCGCG  
 CCGAAGTGCCCATGAAAGAGCGCGTGGTTCGAGTGTATCAAATGTTACCTCCCTTCGCCCTTATCCAACCC  
 CAAGCAGATCTGCAACACCTGGCCCAAGCTGCCCTCAGCTTTGAGCAGAAGGCCTTCAAAGACGCTCAGCA  
 35 GAAAGTCGATTACGACAAAGAATGTAACGACAAATTATTGCATATTGAGATACTCGAGCGAGACAGGCCG  
 CCGTCATGCAGAATGGCATGATTCCCCCGGGCGCTCCCAAAGCCGGCGCATGCGTGGCGTCCGACAAACCC  
 TCCTTCCCGCAACAGATGAATCGAGCCATGCAATCCAATCCCATGGCCGGTCAACAAGCCATGGCCATGGG  
 GATGACCGATCCGAATCAACAGGCCGCCATGCCGAGCGATCGCAACAGCAGCAAGCCATGATGCAGCAGC  
 AGCAGCAACAACAGCAACAACAGCAACAGCAGCAGCAGCAGCAGCCACGCGCTCAACAACGCTCCGCC  
 40 AATACCTCGCCCTGGTCGACGAGCTGAATAACCTGACTCCGCAAGAGTACGAGAACGTCAATCGCGTCGC  
 TCACCAGATCATGACCAAGACCTCGCCGGTGGATGCGGAGAAAATCAAACGCAACCTGCAGAACATGAATC  
 CTGTACAACGCCGTACCTGACTGAAAGAAACATCGACCCGGTTCGCGTATTTCTTTTCGCTCGCAGGCCCTC  
 GCCACCTCAAGCGGCAGATGAAGGCCCGTGTGGACATGTCTCACCCCCAGAATACCGGCGTCGACCCGAA  
 CAATGTGATGATGGGCGCCGATCCGACGATGAACCCCCAGATGTTCCCGAACATGATGAACCTACAGCGCA  
 45 ATTCGGCCTTCGCCATGGGCAACCAGCCAAACATGGACCCCTCTTCCTTCATTGGCAACGTGGGAAACATC  
 CAAGGACAGCAGGCGGATGGCTCCGTTTCGAGGAAGCTGGTCAGCTGGTCGTCCCCGCGAGCTCCTCCCA  
 GATGAACCAACAACCGTTCAACAACGCCCAGAACACCTTCCCGATGGGCCAACAGCTCGCGCAGGGAGGAC  
 AGGCTAATCTGGGCGCTGCCGGCATCAACCCCCAGATGTTCCGCCAACACATGCAAAACACCCCGAAT  
 ATGCCGCCGGATCGGCCCCAGCCGGCCGCCCTTTCCAGCCCCAGACTCAAGCACAGAACCCAGGCTCAGGC  
 50 CCAGGCCCGCGCCAGGCAGCTCAAAAAGCCCAGATGGCGATTTCCAGGCCGGCCAAAGCTAATTCGCACC  
 TGCAACAGCCCATGCCGAGCAAAGCCCTGCCATGCCATGTTGAACCGACCCATGCCCTCCGGGCCAGATG  
 TCTCCCGCGCATGTCGAGCGCAAGTCCGTCTCCGTCCGCGGGCACCCGCCATGGGCCAGCAGCCTTCCAT  
 GGGAGGCCAGCAGCCTATGCAGGGTCGACCGCAAATCCCCCGGGTCTCCCCCGGCCATTCAAGAACAAC  
 TGGCGCAAATGTCTCCAGAGCAGCTGAACCGGGTCTTGGCCAGCGGCGGCCATGGCGAATAATCCGGCC  
 55 CTGGCGAGAGCCAACGCGGCCCGCAATCCGTGCCATGCAGCAGAGCGTGTCCAGTCCGCGCAGGCCCA  
 GTCGATGGCGAACAACAGAACATGCGAGCGATGAATGTACAAGCGCAGCTAGCTGGGATGGGCGGGGCGC  
 AACAAATGATGCCTGGTCAACAAATGTCCCTCCAACAGCAGCAGCAGCAACAGCAGCAGCAGCAGCGTCAA



CCTTTGCCCTGCCGCTGGCGCGCGCCGCACCCCGACAGCCGCACACAGTCCGCTGGACGAGCTGTGTAC  
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 CCACGCGCTCATCGAGTGGCAGCAAACCGCACCCCGGATGCCGGACACGTGCGGGCTCGCCATCATGGCGT  
 TGGCGCGCCTGAACGATAACCCTGGCGACGCAATCCCCGCAGCACGAGAAGCGCGTATTGACCGCGCCCTC  
 GACGCCCTGGGCCACTCACTCGACCAGCTCGCCCGCGGGCGGCGAGCTTCTCCTCTCGGCCTTCGGTGGAT  
 TGTGCAGATCCCACCGCGGTTTCATCGAGCTCCTCCACGAGCGGCATCCGTTTGGCTGGTGATCCTGGCGC  
 ACTATGCGGTCGTCTGTCATCTGCTGCGGGAGCGTTGGTGGGTGGGTGACTGGGGCGCACGGGTGATTCAA  
 GCGGTGGGACGGAGTTTAGAATGGGAGTGGAGAAAGGCCCTGGGATGGGTGTTGGATGCGACGGGATGTAT  
 TCTGCCGCAA

MLLQFDGRSPYGCVECHPQLIQCVDKPSRCPCLCGASMTCDYMATTPANWSTTTESASSPAMTSIADPMNH  
PLAHFAPAGELNHTLELMVQWCTDITYRSVAHQPSVEWIWHAAPREALQRPFLHGLAVSALHLFFRTT  
GDTQAHYLRHTAHAHRQHAEEGLSQALRALDASNCNAFAVCSMLTVFSFALPLAARRTPTAAHSPDLDELCH  
IMRHTHQSMSLCEIVYVWVGRDLHALIECDETAPRMPDTSRLAIMALARLNDTLATQSPQHEKRVFDRAL  
DALGHSLDQLARGGELLLSAFRWIVQIPPRFIELLHERHPFALVILAHYAVVLHLLRERWWVGDWGARVIQ  
AVGRSLEWEWRKALGWVLDATGCILPQ

ATGTCCGGCTACAACAACCAAGTACAACCAGGGCTACGGCTACAACCAGGGTGGTTATCCCCCGCAGGGTGG  
TTACTCCCAGGGTGGCTATGGTCAGTCCCAGGGTGGTAGCGCCAACGATTACTACGGCGGACAGCAGCCTC  
AGCATCACCAGCAGCACGGATACAACCAGTATGACCAGAGCCAGCAGGGTTATGGTCAGCAGCAGCAGTAT  
GGTCAGCAGCAATACGGTCAGCAAGGTCATGATCAACAGGCTCCCGGTGAAGCCCAGGAGGGCGAGCGTGG  
ACTGATGGGCGCTCTGGCCGGTGGTGCAGCGGGTGGTTTCGCCGGTCACAAGGCCAACACGGCTTCCTCG  
GAACCATCGGCGGTGCCATCATGGGAAGCATCGCGGAAGATGCCATCAAGAAGCACAAGAACAAGAACGAG  
GGTCCCCCGAGTACGGCAGCAACTATGGCGGCAGCCAGTATGGCGGCCCTCCTCCCTCCCACGGAGGGCTC  
TAACAACGGCATGATGGACCAGCTGGGCAGCTTCTTCAAGAAA

MSGYNNQYNQGYGYNQGGYPFGGYSQGGYGQSQGGSSANDYYGGQQPQHHQQHGYNNQYDQSSQGGYGQQQQY  
GQQYGGQQGHDQQAPGEAQEGERGLMGALAGGAAGGFAGHKANHGFLGTIGGAIMGSLAEDAIAKKHKNKNE  
GPPEYGSNYGGSQYGGPPPSHGGSNNGMMDQLGSFFKK

ATGTTTCGCAAGAAATCCCAACCCCCCAGCAGCGGTGGCGACACCCCCAAGCTCCGGGCGGCTTGTGAGAAGT  
CCGTCAAGTCGAAAGTGAAATGCAACCTGGGAGGGAAGAACACCTGCATCCGCTGTCTTCGCCATGGCCTTC  
CTTGTGATACCGGGTCGCCAACCGATCCGGCAAGCCGAAGGGGAGCAAGAACCGAGCTACGCTGCGAAAG  
CTGGGCCAGCTCCAGGACGAGAAGCCGGTGCAGGGCTCGCACAGCGCGGGAGCCGAAGAAGGCCGTGGA  
GCCGGTGTGTCCGCCGGAGTATGAGGTGCACCGCAGATTGAGTACCAGACAAGCGAGCCGAGTCAGCCGC  
GGCTGTCTGAGAGTCCACATATGCACGACTCCCACCCGACAATCGACGCCTGCATGCTAGTGAATGAGACG  
CCCATCGACTACACGGCTACCTATGGCGGCCCGTTCTCCCCCGCCATGCCGATGTGCACGCCGGCGTCGAT  
GTCGCCGACATCGCCACCTTCCTGCAAAAGGAGTTTCATCACGAAAGGCCTGACCAGCTTCCCCTGGCCG  
TGCACGTCCCCGGCGCCTTACCGCCGCGCTGCGAGTGCGACGAGGCGCTCGGCTTCCACTTGAACGGACTG  
CGACATATGGTGGTTCGACCCGGCGCGGCTGCGCTTCGACCAGGGCCTGCAGGCGATCAAGACGGCGCTCGC  
CGTATGTCAAGGGTTTCCTGCGGTGCGCGCGCTGTCCAAAGGGCAACAGAACTTCCTGGTCTCGCTGTGCA  
CGCTGGACCTCGTGCTGCAGCTCTTCGACTTCTGGGTGAGTTGCGAGTTCGAGCCACCGCCACGGCCAC  
GGGCCGCCGGCGCTCGTCGCTGGAGGCCGAGCCCATGGCTTACGGCGAGTACGAGACAGCGCCGAGGAGGC  
GCGGCACATGCGGCGGGTGGTGCTGCGCGGGCGCTGCTGCGTACAGGAGAGGTGCTGGGCCTGCTGCACG  
AGGCCGTGGAGCTGGCCGAGGGCCAGGGCCTGAGCAGTAGCAGCAGCAGTAGCGAGGCGCTGGACGGGAGC  
TGCGTGCAGCAGATCATCCGCGGTATGCGAGCGCGACGGAGTCCCTCCTCCAGCCGCTGGGGTGTATTTG  
CGGAGGCAGCGCGGTGCAACTAGCGCATAGACCGAGTACCGGGTTAGATAGGCTG

SEQ ID NO: 40

MFAESQPPSSGGDTPKLRAACENCRCQSKVKCNLGGKNTCIRCLRHGLPCRYRVANRSGPKGSKNRATLRK  
LGQLQDEYKGGGSHSAREPKKAVEPVCPEYEVDRRFEYQTSEPSQPRLSSESPHMHDSHPTIDACMLVNET  
PIDYLTATYGGFPSPAMPCTPASMSPTSPTFLQKEFITKGLTSFPLAVHVPALPPRCECDEALGFHLNGL  
RHMVVDPARLRFDQGLQAIKTALAVCQGFRLCARCPKGNTNFLVLSLSTLDLVLQLFDFWVSCFEAAHGHGH

GPPASSLEAEPMAYGEYETAPEEARHMRVVLGRLLQCKEVLGLLHEAVELAEGQGLSSSSSSSEALDGS  
WLQOIIRGYASATESLLQPLGICGGSQVLAHRPSTGLDRL

**SEQ ID NO. 41**

5 ATGGACGATACCCACCCCGCCGCCACCGCCGCCGTTGCCCTGGCCCAATTACACCACAATCGCTTGGT  
CTCCGACTGGGAGACGGACATGGAATCCCACTCCGACAATGACATCAGCCGCGACCGCATGCGATCCTCCA  
TCGAGCTCCCTCTCTGCGCGACCACTTCAAGCAGGACTCCCTCCCACCCTTCTCCCCGCGACCGCGCGAA  
CTGCTCCCTCCATCCTCAACCACTCGCCCCAGGTGCTCCTCCACTCTTCCCCCATCCAGCAAAAGAA  
GTGGCCGCGCCCGCGCAAATCCTCCATCTCCGGCGCTCGCAAGCCCCAAACATGAACGCTCCAAGTCCAAGG  
10 AGTACGGTCGCGGCCCCAGCTTAGGCGATCGCAAAGCCCTGTCCGCCGAACCCAGACCGCCGCTGGGCT  
CAGGGCAAGCGCTGGGAGGATCTGATCGAAGCCGCGACTTCGGCGACCGAGGCCGACGACGAACGCCATTC  
TGAGGTGGTGGTGGTGGCCACCATCCCTCCGGTGTCCAGCTTCACCTCCGCCCCCATGGGGAAGAATCGCT  
CGTCGCTTCCCCCGGGATTCCAAGGACTACCACCCCCCACCTCGCATCGTCCGTTCCCGCCTCATCCCTAC  
GCCGCGTCGCGGTTGAACAAGTCCCTGACCCCCACCGCCGTACGACCTCGCGCGCAGCCGGGACAATGACCT  
15 GGAGCCCTTCCCTCGATAGAGTCGTCCCTCGACTCCGCTCGACCGCGTCCGGAAAGACCCTCCACTATA  
ATCAGTCGGTCCGGCCAACGACTCCAGTCCGGTGTGAACATGTTCCCGTCGTCCGCCGTGCAGCGCCAA  
CACCATCGCTTTTCCAACCCACCCCGCTCCATGCGGAGCCGCGAGATCCAGATCTATTGCGCCCACTG  
CAAGCGACCGTGGGCGCTCAACGAATGCTACGCCTGCACCGAGTGCATCTGCGGCGTCTGTGCGGAATGTG  
TCGGAATGTTTATCGGCAGCCCGCCACCTCCTTCCGCAACGTACCTCCAGCCCGGCAGTGCCTTGCCC  
20 CACGCCCCGACCAGCTATCCTAGCGCCCGAGGTTGTCCCGCTGTGCGACCGTCCGCGGCAAGTGAAGGC  
TTTTCAGCTGGATTTCAAG

**SEQ ID NO. 42**

25 MDDTHPAAATAAVALAQLHHNRLVSDWETDMESHSDNDISRDRMRSSIELPSLRDHFQDSLPPFSPRPRE  
LLPSILNHSPGRSSTLPPIQKKWPRPRKSSISGARKPKHERSKSKEYGRRPSLGDRKALSAEPQTAAWA  
QGKRWEDLIEAATSATEADDERHSEVGRSPTIPPVSSFTSAPMGKNRSSLPPGFQGLPPPTSHRPFPPHPY  
AASPLNKSSTPPPYDLARSRDNDLEPFPSISSLDSASTASGKTLHYNHVGPANDSSPVLNMFSSAVQRQ  
HHRFSNPTPASMRSREIQIYCAHCKRPWALNECYACTECICGVCRECVGMFIGSPPTSFRNVTSSPGSALP  
30 HGPTSYPARGCPRCRTVGKWKAFQLDFK

**SEQ ID NO. 43**

35 ATGCCACCTCCTGTGCGCAGATACGGCATGGGCGCCGCCCTTCGCTCATTTGCAACAGGCCCATCTCCA  
GCAGCAACAGCCCCAGCATCATCCCCATGCCAGTCGGCCAACACAGCTCTTCCGCCGCCCTCGCTTGGCG  
GCCATCCCGGCTTCGCCGCCAGCACCAACCAACATGAACCCCTTCACGTTATCCGGCACGGGGATCGCG  
AATGGCATGTGCGTGTGCTGCGTTTGGCGGCGACGGTGGAGGCACGGGCCTTGCCAGTCATGCCGCGCAGAT  
GGGTTTCGCGAGAGGGGCACAGATGCAGCAACAGCAGTTACATCAGGCCCACGACGGCCGACTAGCCCTCG  
40 AGACAAAGCCCGTGGCGTCAAAACGCGGATACGAGACGTATGGAAGCATAATCTTGCTCAGGAAATGGCG  
ATCCTCAGACAACCTGGTGGAGAAGTATCCCTACATCAGCATGGATACCGAGTTTCCCGGCATCGTCGCTCG  
TCCCATTTGGCGCCTTTACGAATAAAGCGGACTACCACTACCAAAACCCTTCGATGTAACGTGACCTGTTGA  
AGATGATCCAGCTGGGAATCACCTTTTTTTCTTCCGAAGGAGAAGTTCCTCCCCCAATGCCACCGATGCG  
AATGGACAGCGCTCGGAAACGGTCTGGTACCTGCGCCCTGCACCTGGCAGTTCAACTTCCGGTTTTCGTT  
GGAGGATGACATGTACGCCAAGAGTCAACGGCGATGTTGGCGAAGGCCGGTATCGATTTTCGCCATGCACG  
ACAAGAATGGAATCGATCCCTTTGAGTTCGGCGCCCTCTTGATCAGCTCAGGCCTCGTCTCTCGATGAC  
45 GTCCACTGGGTTTTCGTTCCACTCCGGCTACGATTTTCGGCTATTTGATGAAGATTATGCTCTGCAACCTCT  
CCCGGAGAACGAAGAGGAATTTACAGGCTTCTCAACATCTTCTTCCCGTCATTATACGATATTAAATACC  
TGATGAAGCATGCGGGTCGCAATCAAGCCAAGTCGGGATGCAAGATATTGCGGACGAGCTGGGCGTCAAG  
CGTGTGCGGATTGCTCATCAGGCCGGTTCGGACTCGTCTCGTCACGGGCGAGATCTACTGGAAGATGCGCCA  
GTTGGTCTTCAACGGAAACATCGACGAAGCGAAATACTCCGGTCAGATCTGGGGGCTGAACGGCCAAATGC  
CAGCGCTGCTGTATTCTATGCAGCCCCATCAGACCCCCAATCTCAACGGGGCTACCATCTATTTCGGCCACT  
50 GGCACCCCCAGTACGCCCAATGCTGTTCTTCTGTACGGGCGAGCCACACCCCCAGCATGCACTGACACC  
CGGTGCCACCGGCGGGGTGTTGGGACAGTTCAGATGGCAAGTCA

**SEQ ID NO. 44**

55 MPPPVGRYGMGAAPFAHLQQAHLQQQQPQHHPHAQSANTALPPPSLGHPGFAASTNTNMNPF TLSGTGIA  
NGMSVAAFGGDGGGTGLASHAAQMGFARGAQMQQQQLHQAHDRLETKAGGVKTRIRDVWKHNLAQEMA  
ILRQLVEKYPYISMDFEPGIVARPIGAFTNKADYHYQTLRCNVDLLKMIQLGITLFSSEGEVPPPNATDA  
NGQPLGNGLVPAPCTWQFNFRFSLEDDMYAQESTAMLAAGIDFAMHDKNGIDPFEFGALLISSGLVLLDD

VHWVSFHSGYDFGYLMKIMLCKPLPENEEEFHRLNLIFFPSLYDIKYLKMHAGRNQAKSGLQDIADDELGVK  
RVGIAHQAGSDSLVTGEIYWKMRQLVFNGNIDEAKYSGQIWGLNGQMPALLYSMQPHQTPNLNGATIYSAT  
GTPSTPNAVHSVTSHTPQHALTPGATGGVLGQFQMAKS

**SEQ ID NO. 45**

ATGACCGAGCGCTCCGTGCAGATCTGGTTCCAGAACAGGCGCGCCAAGATCAAGATGCTCGCGAAGAAAAG  
CATCGAGACCGGTGAAGGCTGCGACTCCATTCCCAGTCGATGCGCCAGTATCTGGCCATGCAATTCGATC  
CGAATAAACCCGGCGCACGAGACCCGTTTGGTCGCACGGGGGCTTTCGGTCCCAATGGCGGGTATCCCCAC  
GACTCGGCCCCCTCTGGCAAAGTTGTGATTACCATTTTACCTGCCGCTCTTTGACCATCGGTAGCTGGCG  
CCGCATTGGACAGAACCGGATGGACTTGGTGGTTTTCTACTCCCCGAGAAGGCTTGCATGACCTACTATA  
TCAACAACGACTCGGCCGGCTACAAAATCGAGTACCCTTTTGCTTACATTAAAAACATCACGCTGGAATCG  
GGCGATCAGACAGCGCAGCCCAACGAGCGCCCCCGCGCCCGGGCGGTCTCATTGTTGAATTGAACCGCCC  
GCCGCTCTTCTACATGGATTCTCCAACTCCGGTGGCTTCTACAGTGCAGGCGACTTCACCGAGGACCAGC  
AGGCCAGCCAGCTGTTGGTGCACCATCTCGGCGGCCACCCCAAAGTCCTGAGCGTCCAGCTGGCCAAGCTG  
GTCTCGTTGGAGTCGTTCCAGAACCGTCTGGCCTACAACAACCTTCGCCATGAGTGCGCCCATGTCCCCGCC  
TTTTATCCAGCGGCCCGCTCCAGCCGAATCAGTTTGGCCCGGCGTTTGTGGGCATGTATGCGGAGAACC  
CCGCGACGCTGAGCCTGCAGCAGGCGGCGCGCGGACACAAGCGCCAACGCAGCCGTTCCGGTCCCCGTAGCC  
GTCGACTTCTCGGCCATGCAGACCCCCATGTCGTACCAGATGCAGAACCCGTCGCAGTTCAACACGCCAGA  
TTCGAGTATCTTTGCCCCGTTCCGCAGTCGACCCATCCACTGGCGGTGAACCTGCGCATCGATACGTCGG  
CCCCCTACGGCTTCGACCCGCGCGGCCATCCCATGTCGGCGGCCACCACGAACCTCACCTCGGACTTTGCC  
AGTCCCTCGCTATTCTCGACGGGGCTCCGGGCGAATCCACGCGCGTCCGACGAGCATCCACCCGCAATT  
CAACATGCCATTTGTGTCCCGCGCGTGGACTCGTCTACGCTCGCCACCCAGGCCGCGTCCGCGTACTCCA  
CGGTACGCCACGCGGACCCCATGATTGCCGACCAGTCCCCTCCCATGACCAACATGCATGCGTCGCAGGAG  
ATGTACGGCCTGAGCAACGAGCATCAACCCCATTTTGGCGACGAGAACATGTCCATGAGCGGCATGTTCCC  
CAAGCACAAACATGAATTTCTCGGTACCCACCACGATGGACGTGCGAGGCAACACCTTTGATCTTCCCATTC  
AGACCCTGTCCAACCACCCGTCGCCGGGGTTCAGGGTGACTACCAAAGCATGACTCCGCTGGAGAATGTC  
GATCCCAACACGCTGGCTCCTGGGGCG

**SEQ ID NO. 46**

MTERSVQIWFQNRRAKIKMLAKKSIETGEGCDSIPESMRQYLLAMQFDPNKP GARDPFGRGTGAFGPNGGYPH  
DSAPSGKVVIHHFTCRSLTIGSWRRIGQNAMDLVVFYSPEKACMTYYINND SAGYKIEYPFAYIKNITLES  
GDQTAQPN GAPP RPGLIVELNRPLFYMDSSNSGGFYQCGDFTEDQQASQLLVHHLGGHPKVL SVQLAKL  
VSLESFQNR LAYNNFAMSAPMSPFFIQRPASQPNQFAPAFVGMYAENPATLSLQQAARGHKRQRSR SV PVA  
VDFSAMQTPMSYQMQNPSQFNQPDSSI FAPVPQSTHPLAVNLRIDTSAPYGFDP RGH PMSAATTNSP SDF A  
SPSLFSTGPPGESTPVATSIHPQFNMPFVSPVDSSTLATQAASPYSTVSHADPMIADQSP PMTNM HASQE  
MYGLSNEHQPHFADENMSMSGMFPHNMNFSVPTTMDVGGNTFDLP IQT LSNHPSPGVQGDYQSM TPLENV  
DPNTLAPGA

**SEQ ID NO. 47**

ATGATGCCAGCGCAAATGCGGCAGCTTAACATGAGAGGAAATGCAATGGTTCTCCCAACCTTCAGAAGAG  
TGTGCTGCAGAACAAATACCTCTGGCCTCTCTCAACAACAAATCGCCCACTCCAGAAGAACCAACATTTGC  
AGATGATGCAGATGCAAAGAGATCAGTCCGAGATGGACATGAATGGTCACCGTCCCCAGTCCCCTGCGTCT  
GCCGAGAACGCCCTTCCCCATCCAAGCGGCCCGTCTGGAAGGCGGACCGATGAACGGACAACAGTTAGC  
GCCTAACGGACGTGGTCAAGCACAGGGAATGCCCGTCAACCGAATCCGCAGGCCCTTTTTATGCAGAATG  
GGGGTCTCAACCCACGAGGAATGAACCCGGCCCAACTTCAGGCTTTCAGCAGGGTCCGGGCGCGCAGCAG  
AAATCAATCCAGGGCATGCCGAATGGCATTATGAATCCCGGTGTGATGCCAAACCAGACGGATCTGATGCC  
CATGCCAGAAGGT CAGGGTATGTACCCGATGAACGGTGACTACTATGGCGCGAATGGTCAAATGGCCCAGG  
TTCGGGCTGGGATGCAGACGCCTGGCAATCAGGGAAACCATGCTCTTCAGGATTATCAGATGCAGCTTATG  
TTGCTGGAACAGCAGAATAAGCGACGTTTGATGATGGCTCGCCAAGAGCAGGATAGCATGGCTCGTCTCTGA  
CGGCCAGCCCCCAATGCCTGGGCAGCAGCAGTTGCCGCCAGGCACCTCTCCCAAGGCAGCAGGGCGGGCG  
CCTCTCCGAACCCCAACGATCAGATGAAGAGGGGTACACCGAAGATGCCGAGACCGGTCTTCCAGGCTCT  
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ACCCGACATGACGAACCCATTCTTCGCCGCTCCGAACGGTATGCGACCCCCGAGCTCGAACCCGGCATTTA  
CCACCGGTCGCCGATGGGCCAGCAAATCTCTGCAGGTGCCAGATGCCGAATCGCGCTTGGCAGCCGAG  
CAGGGCGCTCAGGGCCAACCTATGCCCCACAGCAGTCCCCTGCGGCGCAGCCGGCCACGGGAAC TCCCCA  
GGAACGCAACCAAATGCCGCCGCCAGGCTCCTCCCGCTGCTGGGCCAATTCGGGACGCACGCAGCCGC  
CGTCTCCTCAGACCGGAGCCGCTGCCCTCCACGCCCCAGCAATCCAACAAGGCCGACCCCAAGGGGAAG  
AAAGACACGAAGGACACTAATCGGAAGCGGCCGAAGAAGGCAGCTGGCCCTGCAGCGGCTGCAGCTGCCTC

GAATACTGCCGCGACCCCTCGTCCGAGGCTGAGCATGCGACGACGCCGTCGACGCCGATCACGCCTCAGC  
ATCCGAACTCGTTCAACAAGCCGGGGCCCAATACCACGACGAGTGCGCCCCAGCAACCCACATCGGCGCCT  
GCCGCACCGACGCTGGTGCAGCCGCCGCCACCCGACCAGAACCAGCCGTTCAATGACCTTAGCATGCCAGA  
CGCGTCTGCTTTCAACCTGGACTTCAGCGCCCTGGAGAATCCGGACATTTTGGAGAACTTCGACTTCGATA  
5 CCTTTCTCAACACTGACGCGGATACGGCGGGGTTTGGGTTTGATCCCAACATGCCATATCCTGGGGACGGC  
GTTGAGACTGGTGCCGGAGAAGGTCTG

**SEQ ID NO. 48**

MMPAQMRQLNMRGNAMVPPNLQKSVLQNNNTSGLSQQQIAQLQKNQHLQMMQMQRDQSEMDMNGHRPQSPAS  
10 AENAPSPSKRPRLEGGPMNGQQLAPNCRGQAQGMPPQPNPQALFMQNGGLNPRGMNPAQLQAFQZQGPQAQQ  
KSIQGMPPNGIMNPGVMPNQTDLMPMEGQGMYPMNGDYYGANGQMAQVRAGMQTPGNQGNHALQDYQMLM  
LLEQQNKRRLLMARQEQDSMARPDGQPPMPGQQQLPFGTSPQGSRAGASPNPNDQMKRGTPKMPQTGLPGS  
PNPGDVAQGRGSPASMNFNQAQMPDMTNPFFAAPNGMRPSSNPAFTTGPPMGQOI PAGAQMPPNRAWQPQ  
15 QGAQGPMPFPQQSPAAQPATGTPQERNQMPPPPQAPPAAGPNSGRTPPPSPQTGAAPPTPQQSNKAAPKKG  
KDTKDTNRKRPKKAAGPAAAAASNTAATPSSEAEHATTPTSTPITPQHNSFNKPGPNNTTTSAPQPTTAP  
AAPTLLVQPPPPDQNPFDNLSPDASAFNLDFSALENPDILENFDFTFLNTDADTAGFGFDPNMPYPGDG  
VETGAGEGL

**SEQ ID NO. 49**

ATGGAGTATTCCGGGGCAGATCCACCTTTGTTGCGAAAACCAGCGCCTTGGCAGTCACGCATCCCTTCTG  
20 CCGCATTATGAAGCGGGACGGTAACCTGCGGCTGGCGAGCGGCTGCCTTTGGGTATTTGAAAGCCTTTTCA  
ATCTCCACAATCTCATCCATGCGCAGTCCGAGTTGGTCCGCATCAAGGGTCTCAATTGCTTCTTGACCAA  
GTAGGTACACCAGGAGCATTTGTACGAGATCTTTGTAGATGCAACCGAGAGTGTCTTTGAGCAAGTGTGTGA  
GGCGATTACAGCCGGGTACGGGACGATTTCGTTCTGAAGGATCTCTTCAATGAGGAGTTCAACTCCAGTG  
25 CGGTTCATCACGCATTTTACGGCTTCTTACCAGCGCCTGGATGAAATTGAATCCTCATCGGTACCAGGCCTTC  
CTGCCGCTCCCCCTCGATCAGTACTGCACGACGCGGATCGAGACCGTCAAAACGGAAATTGATGAAGTGGG  
CCTCCAAGCTCTGGTGGACGGCGTCATCGAGCCGTCCGGCGTTGCTGTGAGATCCTGTACCTGGACCGGA  
GTCAGGGCGAAGCAGTCACTCCCCATCTCTTGACCCGAGTCCGGCCTAGCGCTTCGACAATCCGTTTGCTG  
TATCGCCCTGGCCACTACGATATTGCGTACCAAGCGGAACCTACCGTGACAATGGAACCCATCGTCAATTA  
30 TCAGTACGGCATGACCACCAACTACTCGCCCTGGGACCAAGGCGCCCTCTCGTTTGATGTGAAGTTCGAGTC  
TCATGTCCATTCCCAACCTGATGATGGACCCCTCCTTTGCGCTCTCCCTTCCCCCATGACTCCCGCTCCG  
AGCCCGTACCGCGTCTCGCCCCCTCAGGAAGTGTTCCAACCTCCGATGCACACGCCTCCGCCACCGGTCCC  
CGTCGCATCGCCGCCACCACCCCGCATGTGAGCCCCGCCCCGATGACTTCGTTACCTAACCGGTCTCTCAG  
35 ACGGGCCGCAGATTGACTGAATCCGTTGGTGATGAAGCAGAACTTGAGCCACTCGCTCCCCGTACGACT  
CCATTCAAGAATTGCGCGTACAACCAGGCCATTTCCAAAACCAGGACTTTGAGCCAATCCACTGGGAACC  
CAGTGATTCCCGCAA

**SEQ ID NO. 50**

MEYSGADPTFVAKTSALAVTHPFCRIMKRDGNCGWRAAAFYGFESLFNLHNLIIHAQSELVRIKGLNSLLDQ  
40 VGHQEHLYEIFVDATESVFQVCEAIQAGVRDDSFLLDLFNEEFNSSAVITHFRLLTSAMMKLNPHRYQAF  
LPLPLDQYCTTRIETVKTEIDEVGLQALVDGVIEPSGVAVEILYLDRSQGEAVTPHLLTPSRPSASTIRLL  
YRPGHYDIAYQAEPTVTMEPIVNYQYGMTTNYSPWDQGALSFDVNSSLMSIPNLMMDPSPFALSPSPMTAP  
SPYRVSPQEVFQPPMHTPPPPVPVASPPPPRMSAPPPMTSLPNRSSDGPQIRLNPLVMKQNLSHSLPVT  
45 PFKNSPYNQAHFQNDQDFEPIHWEPSDSRK

**SEQ ID NO. 51**

ATGGCTACTACTGACTGGCAGCCCGACTTTGTACCTCCGAACCCACCGGCCCTAGAGAGTGTAGGAGCTCA  
TACGGACCGGGCTCTTCAGAATACCTCTGGGAACGTGCAGTCCTATTCAGACAATCTCGCCCCAACGACA  
CGACGGGGCGAGATAGTGGACATCTGCAGCCGTATGCTCCCAAGTATCCTCCTCCGCTCCCAATCCCTGCC  
50 CATCCTGTCCCTTCGGCTGCGGCCAGCCTGCACCATCAACACATCCTAGCCAACCGATGGCAGCAGAAGAA  
GCTCCGTCGACTTCAGTCCCTGGGGCCCAACCAGCTGGTTGGTCCCGTCGGGGAAGAAGCTATCTCAAGT  
CCCAGAAGTACCTGGAGTATCGAGCGCGCCCTCGACGGGACACGGGCAAGGATGGGGAGCCTGTCTGGTCG  
GATGAGCTGGAGGATGCCTTCCAACAGCACTCGAGGCAAACCTCCCATGGGCGGAGAAAGTGGTCCGA  
ACGGGGCAAATCCTATGGTTCGAAACGAGCTGATTGCCGAGTTTATCTACAAGGCTACGGGCAAGAGGAGAA  
55 CTAGGAAACAAGTGTCCAGTCACCTGCAGGTGCTCGACTCGTTTCTCAAGGGGGACCCTGACTGGGAAAGA  
CTGGTACGGGAACAGCCGACAGACCGCTCTGCAGCCCGCCCTCAAGCAGCTGGCCCAAGGTGGCGGACCTC  
CATGGAACACCCCTGTCAAGTCACTACAATCATCTCCACGCTCCTTACCATGATCCTCTGCGACCTGTGC

AGCCTTACGTGGGGGAGCTGCCTCCCCCTTCCTTTGCCCCCAACCCCAACGTCCATGATGCCAACATCAAC  
ACCGTCCAGGCCTCAATTTTGACATGTGGGTGAGTGACCGAACCAGCCGACCGCATTGAGAATGCTTT  
CCATGTATACACCCGCTTGACGGGCGACCAACGCCATCCCGTGGCCCCCTTCAATGCCGTGGAGAACATCG  
TCGGGTGGCGGACCTACTTCCCTTATCTGAATTCCTGATGGCGGACCCAACTGCTTCCCTGAACTGCGAG  
5 ATCATCCTCCTCGAAGCCAACCTCGAGTTGATGGACGACTTTCCTCCGTCCGGTTCGCGGCTGGGGATCCA  
GCTGGAGCTGGACTTTGCCCATTCGCTGTGGGCGATGCACCAGTCAGTCAGATGGACAACCTGGTCTTGCA  
GCACCTACATGTATGAGGAGAGCCAGAAGATCCTGGAGGTCAACCACAGCCTTCAAAGCCGGCTTCGACG  
AAAGTCAAGCCACCGTTCGAATCGCTCTGGTGGGCCAACTCTTCACACAGCTCACGCAGGAGAAGCAGAT  
GGCCGAGAAGGCGGGTCAGCATCATGCGGCGGACGAGCACACGCGGCACCTTCTCCGGACCATGTCTGCGG  
10 TGCAGGAGATCCGTGCTACGTCTCCCAACTCCCGTCGACTCTCCAGCCACTACGGCGGCTCCTCGTGCGAC  
GAGAGTAAGCGGGTCGCGATCTTGCTCTGGAAGTTCCGCCAGACGCGGCCTGGGGAGGTTGGCACCACGAC  
CTGGCGGAGACTCTTTCCGCCGCCGACCGCACGTCCACCAATAGCCCTCGTCCGGCGACGGGCATCGACC  
TCCCCCGCTGTCACTGGACTCGATCCTGCTCAACAAGCCCGCACCCAACGTCTACCAAGCGCCTCCGCCG  
CAGCCACACGAATTGATGCACCACCACGGCGCGTTCGAGCCTCCTTGGCAGATGTACCCACCCCGCATGA  
15 TCACATGTACCCACGCGGAGCTTTGATCTTCTCAACTCGATCTCGAAACCGGAGGACGGCCTGGGTGACA  
AGACGGCGGTCTCGTCGGTGATCGACCCCTTCCCCAATATGCAGCAGCATGAGACCAGCCAGCCGCCAAC  
CTCAATGGCAGCAACGCGGTCGATCATGCTCAACGTGCCGGACATGTGCTTGTGCGACCACAACCTGGG  
GGGATACACAAATGGGCCACGAGACCCACTACGTGCCGCCACCGCAGCAACACGGGGTGATGTCCTCCCG  
ACAACAACAGCGTTCTGAAATAACATCTTTGCTCCGGACCGCAGTCGTTGAGGAGCTGGGCCATAACAGC  
20 CACGCGGCGTGGTCGGGACCGTCCACGACCCCTCCCGTCGGACGTGGGATCCAACAGCTACGGCCATCTTTC  
CTATCAGTCCGACCAGCACCCGCCGCGACGCGCGAGCCCCATCAGTCTAACGGCTTCGAGGGCCTGATGG  
GGACGGATCTGATGGACAAGCTCGTGGGCAACATGCCGGGCGACCCCTGGCTTGAATGGGGCAGGCCCCGAT  
CACGCCACATCCGCGTACCCTGAGAACAGCACGGTTGAGGCGGT

**SEQ ID NO. 52**

MATTDWQPDFVPPNPPALESVGAHTDRALQNTSGNVQSYSDNLAPNDTTGRDSGHLQPYAPKYPPPLPIPA  
HPVPSAAASLHHQHILANRWQKKLRLQLSLGNQLVGPERRRSYLSQKYLEYRARPRRD'TGKDGEVWS  
DELEDAFQQALEANPPMGRKRWSEGRKSYGRNELIAEFYKATGKRRTKQVSSHLQVLDSFLKGDPDWER  
LVREQPTDRSAAQPQAAGPRWRTSMHEPLSSSHYNHLHAPYHDPLRPVQPYVGELPPPSFAPNPNVHDANIN  
30 TVQGLNFDMMVWSAPNQPDRIENAFHVYTRLQGDQRHPVAPSMPLNIVGWRTYFPYLNLSLMADPTASLNCE  
IILLEANLELMDDFPPSGSRLGIQLELDFAHSAVGDAFVSQMDNWSCTYMYEESQKILEVNHSLSKPAS'T  
KVKPPFESLWWAKLFTQLTQEKQMAEKAGQHHADEHTRHFFRTMSAVQEIRATSPNSRRLSSHYGGSSCD  
ESKRVAILLWKFRTQTRPGEVGT'TWRRLFPPPDRTSTNSRPATGIDLPLSLDSILLNKPAPNVYQAGPP  
QPHLMHHHGASQPPWQMYPPPHDMYPTGSFDLLNSISKPEDGLGDKTAVSSVIDPFPNMQQHETSQPPN  
35 LNSNGGPIMLNPDMSLSHHNLGGYTMGHESHYVPPPPQGHGVHVPDNNSVLNNIFASGPQSFEELGHNS  
HAAWSGPFSTTLPSDVGSNSYGHLSYQSDQHFPATREPHQSNFEGLMGTDLMDKLVGNMPPGDPGLNGAGPD  
HATSAYPENSTVEAV

**SEQ ID NO. 53**

ATGCCACCTCCCGTCGGCAGATATGCGCCATCTGGCTTAAACGCTCCATACAACATAACAAGCTCACCT  
TCAATCTCAACATCCCGCACACGCACAGTCCGGAACACACTCCCTCCCCCTTCGCTTGGTCATCCTGGTT  
TCGCGGGCAATCCGAATACCAACATCAACCCTTTTACACTATCCGGCGGAATTGCAAATGGTATGGCGGTA  
GCCGGCTTCCCGGGAGCTGGTGCAGGTGATGGCGCGGCACCGGTCTGGCTAGTCATGCGGCACAGATGGG  
40 ATTCGCGCGCGGTGCGCAAATGCAACAACGCAACTACACCAGGGTCACGACGGTCGGTTAGCGCTCGAAG  
CAAAGGGCGGTGCAGTGAAGTCAAGAATTAGAGATGTCTGGAAGCACAACCTGGCCCATGAGATGGCGGTG  
CTGAGGCAGTTGGTCGACAAGTACCCCTTACATCAGCATGGACACCGAGTTCCTTGGTATTGTTGCTCGGCC  
GATAGGGTCTTTTTCGAACAAAGCCGATTACCATTATCAGACCCCTCCGATGCAATGTTGATCTTCTGAAGA  
TGATACAACCTAGGCATCACGTTATTCAATGACGAAGGAGAGGTCCCCCAGCCTCAGGCACTGATGCCAAT  
GGACAAGCGTATGGTGTGCCCGCTCCCTGCACATGGCAGTTCAACTTCCGATTTTCACTTGAAGGCGACAT  
50 GTACGCCCAGGAGTCAACAGCCATGCTTGCCAAATCTGGAATTGACTTCGCCATGCATGAAAAGAAGCGCA  
TTGATCCTTTTCAATTCCGTGCTCTTTTGATTAGCTTCGGATTGGTGCTACTGGATGACGTTCACTGGGTG  
TCTTTCCACTCCGGGTACGACTTTGGCTACTTGTATGAAGATCATGCTCTGCTCCCAGCTTCCAGAAAACGA  
AGAGGAGTTCCACAAGCTTCTTACCATCTTCTTCCCGTCACTTTACGACATCAAATACCTCATGAAGCACG  
CCGGTCGCAACCAAGCCGTCAACGGTTCCCTCTCAGTCAGGCTGCAGCCAGATTCTCACCATCTAGGC  
55 CAGAAATCTGGTTTGCAAGACATTGCCGATGAACTTGGCGTGAAGCGCGTCGGAATCGCTCACCAGGCTGG  
CTCAGACTCCCTAGTCACCGGCGAGATCTACTGGAAGACGCGCCAACCTCATTTTCGAGGGGGCAATTGACG  
ACAGCAAATATTCTGGCCAAATCTGGGGTCTCAACGGACAAAATGCCTGCAGTGGCCTACAACATGGCTCAG

CAAACGCCCAACCTTAATGGCGCGACCATTACTCGGGCGGCACCCCCAGCACTCCCAATACTGGGTCTCA  
CGGGGCTGGCGCCACACACCTCAGCACTACGGAGCTGGCTACAATGCCCCGACTCCCGGAGCCTATCAAA  
TGGGCCGGGTA

**SEQ ID NO. 54**

MPPPVGRYAPSGLNAPYNIQQAHLQSQHPAHAQSGNTLPPPSLGHPGFAGNPNTNINPFTLSGGIANGMAV  
AGFPGAGAGDGGGTGLASHAAQMGFARGAQMQQQQLHQGHDGRLALEAKGGAVKSRI RDVWKHNLAHEMAV  
LRQLVDKYPYISMDTEFPGIVARPIGSFSNKADYHYQTLRCNVDLLKMIQLGITLFNDEGEVPPASGTDAN  
GQAYGVPAPCTWQFNFRFSLEGDMYAQESTAMLA KSGIDFAMHEKNGIDPF EFGALLISSGLVLLDDVHWV  
SFHSGYDFGYLMKIMLCSQLPENEEEFHKL LTIFFPSLYDIKYL MKHAGRNQAVNGSPLSQAAAQILTNLG  
QKSLQDIADELGVKRVGIAHQAGSDSLVTGEIYWKTRQLIFGGAIDDSKYSGQIWGLNGQMPAVAYNMAQ  
QTPNLNGATIYSGGTPSTPNTGSHGAGAHTPQHYGAGYNAPT PGAYQMGRV

**SEQ ID NO. 55**

ATGTTTGCTGCTGGTGGAAGCCCTCAATTTGCTTCGCCCATGTCTGGTACAACACATGGGTTCTGGGAAGG  
AAAGACGGCCCGCCGTCGTCTTTCTGTGCCAACGAGTAGCAACCCCTTCTCGCACAGCATGGCAACGCAT  
ATCCTCCAGGATATCACAACCCCGTCGGTGACCTTATCAAAATGCTGCTGGGGTATTTCGCAAGCCCCACT  
AGCACACACTACTCTGTATCTCGTGATGAGGGTACCTTAAGCGCGGCCGAGGCGGAGATGCGGAGGAGAAC  
GTGGCACCCCTTCGTATACACAGGGTTTCCACGCCCTGGAACACTAGTGGCCTGAACCAATATCATACACCCG  
ACAATGTCCCAGCCTCATTTCGGTGCGAACGGGTCGACCGAGCATCCGCCCCGGCTTCCCGGCATTGAGAGT'  
TTTGACAAAGTTGTCCAACGGCCGATGACCCCGCCACCAGGAAAACCAGCCCAATGCAGCTTGATGGCCA  
GCATCGTCCACCCCTAACCCAGGCTTTGGATCAGGGTTCAATTATACACAGCCAGCCACCCGTCACCAC  
CTCCCATCTCCGGCCCTGGTCACCGACGAGGCCATGTATCCTGGGATATGTCTTTGCATCATAACCTGACC  
GGCCTCGATATCCGAGACCGACGTCTTCTACCGCATCTGCTTCTCAATGGAGCCAACAAACCCCTCGCAGA  
ACTCCAGAATGTCTCTTCCCGCCCGTCATCATCTTACCAGCCTGCATTTCGGCCCAACGGCCGAGAGAAGCC  
CTGAAGAGTATCGGGGACATCGCCCAAGCCTCTCAACGGGAAGCCGCACGCGAACTTCCCCCGAAGATTCTG  
AGTAGCAGCGAGGGTGTCCATACCCCATCCACCGCATCGCTTGAGTATCATCCCGCGATTGTGCACAGCAG  
CGGATATATCGAATCTGATGATTCTCTTGCCTTCCGATCACCTCAACCGATCTGTGGCCGTCACTCCT  
CCCACGCGGATGGCTATGAACCCCAACAATGACCGGGAGCCAGGCCCGACGTCTTCCCAGACTCTCCTGCC  
CGAAATTCGGGCATGGGTTCGCTGGAGGCTCTTGTGCGCGTCGCCACAAGCGAGAACAAAGGAGCCGCCAA  
GCTATTTCTG

**SEQ ID NO. 56**

MFAAGGSPQFASPMSTTHGFWEGKTAARRLSVPTSSNPFLAQHGNAYPPGYHNPVGAPYQNAAGVFASPT  
STHYSVSRDEGTLSAAEAEMRRRTWHPSSYTGFPRPGTSGLNQYHTPDNVPASFGANGSTEHPRLPGIES  
FDKVVQRPMTPPTRKTSMPQLDQHRPPPNPGFGSGFNYPQPAHRPPPIISGPGHRRGHVSWDMSLHNL  
GLDIRDRPSTASASQWSQQLAELQNVSSSRPSSSYQPAFGPTAERSPEEYRGHRPSLSTGSRTTSPEDS  
SSSEGVTPTSTASLEYHPAIVHSSGYIESDDSSLPDHPQPICGRQSSHADGYEPHNDREPRPDVFPDSPA  
RNSGMGRLEALVAVATSENKGAALKFL

**SEQ ID NO. 57**

AAGACGATGAGCGTGACGGTTTTGGGCGTGACCCACCATTGCTCTCATACTACAGTGTGGAGGACGTGAT  
GCGCGGCATCCTCAACCCACCCTCGATGGTGGATTCCCTACGCTTTATCCGACCCCGCACCGAACTCACCC  
AGAAACAAAGCTTCCGTTCCCCGATCGACGAGCTCGAGGCCAACGCCGTGGAAAACCAGGAGCCCTCCAC  
GCTGCTCTATACGGATATCGCCCGAGATGATGGCCCTCCACGTACGCCATGCCAACCCCTTCAAACGA  
CTTCTACATGCACCCAGTCCCTACGCCGCCACACATCCCCCGCAGCAAGGCCCGATCCAGGGTACTCGA  
TGGGCGCCCCGATGGCAGCCCAAACCGCGCCAAACCCATACCTGCCAAGCCCAGGCCAAACCGCCATCCCA  
CCGAAGCAGGAAGACTACCACGCATTCGCGCGAGGGCCTTATGGCGGCAGCATGGACTCCATGAGCGCACA  
CAGCATGGCCTCCATCCCGGGCAGCATCAACGCGGGGCTGTCCAGCTCACTCAACGAACGAACAGATCCA  
CCTCGGATCACAGCCCTTCCGCTTACCGCAATTCTTCCATCTCTTCGCGCAGCCAGGCCACTGACGCTACT  
TCCCCCATGGATCCATCAACACCGGCCACCTACTCCCGCGGCAGCTTCAGCATGTCCGGTCAACTGGAGAA  
CCCACATCCAGCACTCGATCGCAACATGCCTGGTCTGGATGCTAGCGTTCTGTCGCGAGTCAAATCCTATTC  
ATCCGTCTACTACACTGCGGATCGCTCCAGTACTATGTACCGCGCCTTACGCTGCCACGCAACCTATG  
TCGACATGGACGACTACGGCGGCGACGCAACCACAGATGGCGCAACCTCAAATCTAA

**SEQ ID NO. 58**



KTMSVTVLGVTHHLVSYYSVEDVMRGILNPPSMVDSLRFIRPRTELTKQKQSFRRSPIDELEANAVENQEP SH  
AALYGYRPMQMAPPTYAMPTPSNDFYMHPSPIYAATHPPQGGPIQGYSMGAPMAAQTAIPNPYLPSPGQTAIP  
PKQEDYHAFRAGPYGGSMDSMSAHSMASIPGSINAGLSSSLNERNRSTSDHSPSAYRNSSISSRSQATDAT  
SPMDPSTPATYSRGSFMSGQLENPHPALDRNMPGLDASVRRESNPIHPSYYTADRSQYYVPAPYAATQPM  
STWTTTAAATQPQMAQPQI

**SEQ ID NO. 59**

ATGGCTCCAGGCAGTGGGCGCGACTTTAACTGCTCATGGGAGCATTTGTGGAAAGTCTTTCAATCGCAAGTC  
GGATCTCTGTGCGCCATTATCGCATCCATAACCAATGAGCGCCCGTATCATTGCACCGTAAAGGACTGCAATA  
AGAGCTTCATTACAGCGGAGTGCCTTGACCGTACACTCGAGGACCCACACTGGCGAAAAGCCCCATGTTTGT  
GACCATGAAGGCTGTCAGAAGGCATTCTCCGACTCATCGAGTCTAGCTCGCCATCGCCGAATCCACACCGG  
GAAGCGGCCATACATATGCCACGAGCCTACATGCGAACGGAGTTTTTGTGCGCAAGACCAACCTCACCAAAC  
ACCAACACCGCTCCCAACCTCCAGGGAGCTTGACCCGACCATCCTCAGAAGATGGGACCTCCGAGCATTCT  
TACCACCAAAACCCGTATCAGTCTCGGTCCCAGTGAAGCAGTACATGCTCGCCAGCAACCTTTTACCC  
GCAATCGGCGACACCAAGTCATGAGTTTTACTCGCCCCAAAGTGTCGGATGGGCACCGTGCCGGTTCACG  
AAGCTGCCCCCTCCGATCGTGGCCAGACTGTCCCCGGAACCTCGCCGGTAAACATGCCACACGCTCAACAG  
CCGCAGCCGCACCCGCAACACCACGCGCATCCACAACAGCAGCAGCAGCAGCAGCAGCATCAACA  
ATACTTACAAATGATGCAACAGCGTTACGACAGTCCACGGGCGAACTACCTCCAGAACAAATACCAACATC  
CATCTTTTCAAGGCCACCAACTGCCTCCGAACAGCCAATGATGGTTTCATACCACCCAACTATGCGTAT  
AAACCCCCCGGTCCCCTCTCTTGAACCAAGCGGAGGGGACTGACTGGGGCTTTCTGGGAGTAGGC

**SEQ ID NO. 60**

MAPGSGRDFNCSWEHCGKSFNRKSDLCRHYRIHTNERPYHCTVKDCNKSFIQRSALTVHSRHTHTGEKPHVC  
DHEGCQKAFSDSSSLARHRIHTGKRPYICHEPTCERSFCRKTTLTKHQHRSHPPGSLTRPSSDGTSEHS  
YHQTPVSVSVPTQYMLAQPFYQSATPSHEFYSPQSVPMGTVPVHEAAPPIVAQTVPGTSPVNMPHAQQ  
PQPHPQHHAHPQQQQQQQQHQQYLQMMQORYDSPRANYLPEQYQHPSFQGHQLPPEQPMVSYHPNYAY  
KPPGSRLLNQAEQTDWGF LGVG

**SEQ ID NO. 61**

ATGGATACCCATTCCGATACCGACTTGAGTCATCCTCGAATGCGCGGAGCTATTGAACTGCCCCCGCTCCG  
CGATCATTTCAAGCAGGAATCTCTTCCGCCGTTTACGCCTCGTCTCGCGAGCTTCTTCCATCCATCCTCA  
ATCACTCCCCCGCCCGTCTCATCCACATTGCCGCCAATCCAGCGGAGAGACAAATTTTCCCGCCGCGC  
AAATCTTCCATCACTCAATCTGCGCGGAAATCCAGGCAGGATCGCCCTAAATCAAAGGAATTCGGGCGGCG  
ACCAAGTCTCGGTGACCGCAAAGCCCTTTCGCGAGAGCGCAACCGCGGCCTGGGCGCAAGGCAAGCGCT  
GGGAGGATCTGATTGAAGCCGCGACATCAGCAACCGAAGTAGACGATGAGCCGTATTAGAGGCTGGTCCG  
TCTCCAACGATTGCCCCACTACTTTCCAACGTGACGTCTGCCCCCTCTGGGGTGAAAAATCGGTCTCTCGCT  
ACCACCCGCTTTCCAATCCTCGGGATTGCCTCCTATCTCTTACATCGGCCATTCCACCTCATTCATACG  
CCGCTCGCCTTTGCACAAGTCATTGACCCACCACCATACGAGAACCACCGCAGCCGTGAGAGCGACTTG  
GAACCATTCCTCTATTGAATCATCGCTCGATTCCATGTCTTCGGCATCCGGCAGAAATTTTGGTTCATC  
GGTTTCGGGAGTCGCGCCGTCCATAAACTCTGATTCCAGCCCAGTTATGAATCTTATCCCGCCCATCTCGC  
AGCGCCAGCACCACCGATTCTCCAATCCTACTCCAGCGTCTTTCCGCAACAAAGAGGTTTCAAGGTGTTTTGT  
GCTCAGTGCAAACGACCTTCGGCACTGAATGAGTGCTATGCCTGTACGGAGTGCATCTGTGGAGTCTGCCG  
CGACTGCGTGAGCATGTTTCAATTTCAAGTCCGCCTACTTCATTCCGAACCCAGGGAACGGGTCGTTAAATA  
CCGTCTGTGACAAGGACCAACAAGTTACCTTGGTCTCAAGGGTGTCCACGATGTGCAACAGTTGGAGGC  
AAATGGAAGGCATTCCAAATCGACATCAAG

**SEQ ID NO. 62**

MDTHSDTDLSHPRMRGAIELPPLRDHFKQESLPFFTPRPRELLPSILNHSPGRSSTLPPIQRRDKFSRPR  
KSSITQSARKSRQDRPKSKEFGRRPSLGRKALSAEPQTAAWAQKRWEDLIEAATSATEVDDEPYSEAGR  
SPTIAPLLSNVTSAPSGVKNRSSLPAPFQSSGLPPISSHRPFPPHSAASPLHKSLLPPPYENHRSRESL  
EPFPSIESLDSMSSASGRNFASSVSGVAPSINSDDSPVMNLIPPIQQRHHRFSNPTPASFRNKEVQVFC  
AQKRPALNECYACTECICGVCRDCVSMFISSPPTSFRTPGNGSLNTVLSQGPTSYPGPQGCPRCRTL VGG  
KWKAFAQIDIK

**SEQ ID NO. 63**

ATGAAGAGCGAATCAGGTGGCTCGGACAACCCTGTCAATGCATACCCTCCTCATGGTCCTCCGCCCATGCA  
GATGGATGCTGGACTTGCGGATTCTTCTATTATGCACAGCCACGGGTTCAACCCCTCGAAACATGGCCT  
ATGCCCCCTGCGGGATACGCTGGCGATCCCCAGATGCAGCAGGAACCTGTCCCGCAGGGAAGAGCAGGGGT  
GAACCACCGCCAAAGACTTTCCACTGCTCAACCTGCAACAAGGGCTTCGCACGGCGCAGTGACCTTGCTCG  
ACATGAGCGTATTACACCGGAGTTAGACCCCATGCATGCGAGTGGCCGGGGTGTGGAAAGCAGTTCATTC  
AACGCTCGGCTTTAACAGTGCACCTCCCGTGTACACACTGGAGAGAAGCCTCATATGTGTGAGAGATGTGGC  
AAGCCCTTTAGCGACTCGTCCTCGCTGGCCAGACATCGTCGCATTCACTCCGGCAAGCGACCCTACAAATG  
CCCGTACGCCAACTGTGAGAAGACCTTCACGCGCCGTACGACGTTGACACGCCACCAAAACCACCACTG  
GGACCATCGAAGAAGCCGCTGCTGAAACCGAGGCCCAATTGCGGCAAAATAAGGATCGTGGACGTCCTGGT  
GAAGGAATGTTCTCCGAGCACGCTTCCATCCACTCTACACCGTCACCCGCGCAGCATCCATCCATGTCACC  
TGGTGGCGAGCTTCCCCCGCTGAATATGCATCGCTCAGCTGGCGACTACTACATGGGCACCGGTCCTATCC  
CGCTCATGTGCGTGGGGATTTCCCCCAAGGCAGCCCTCGGGCTTCCCCGACTGCGACCTCTCCTTCGCTG  
TCCAGCTATGGCAGTGCGCCCCACACCCGGCCATCCATGACCTCGCATCCCTACGCTCCGCCTCAGCCTCT  
TGAACCCCCCGCCAACAGTGATCACCGTCCCAATAGTGTGAACGGCAGTCCACACATGACTAGTCTCGGAT  
GGGCCTCGCCGTCTCACGGTAGCATGCCGTGCGCCGATCGGCCAACGACTTCACTTACCCCGAGCCCACT  
GGCCCTGCGTACCCGACATCGATGCCGCCACACATGTACTTCCCCAATTCTACTATTCTGTCGGCCTACCAG  
CACCGAGCCGGAGAACTACGAAATGAAGCCTCGAGGTGACCACTCATGGTCCACTGCTGTA

**SEQ ID NO. 64**

MKSESSGSDNPNVAYPPHGGPPMQMDAGLADSFYYAQPTGSTPRNMAYAPAGYAGDPQMQQEPVPQGRAGV  
EPPPKTFHCSTCNKGFARRSDLARHERIHTGVRPHACEWPGCGKQFIQRSALTVHSRVHTGEKPHMCERCG  
KPFSDSSSLARHRIHSGKRPYKCPYANCQKTFTTRITLTHQNHHTGTIEEAAAETEAQLRQNKDRGRPG  
EGMFSEHASIHSTPSAQHPSMSPGGELPPLNMHRSAGDYMGTPPIPPHVRGDFPQGSPPRASPTATSPSL  
SSYGSAHPHTRPMTSHPYAPPQPLEPPANSDRHPNSVNGSPHMTSLGWASPSHGSMSPSGSANDFTYPEPT  
GPAYPTSMPPHYFPNSTIRRPTSTEPENYEMKPRGDHSWSTAV

**SEQ ID NO. 65**

ATGTCTAACGCAAGGCATTGGGAACAAGATAAAGAGGCAACCGTGTACATCGGAAACCTTGATGAACGGGT  
CTCGGACAGCCTGGTATGGGAATTGATGCTGCAGGTTGGGCGCATCGTTAACGTCCATCTGCCAAAGACC  
GGGTACGCGAGTTACACCAGGGGTATGGATTTGTTGAGTTCATCAGCGAGGAAGATGCCGAATATGCATCG  
AAGATCATGAACGAATCCGTCTCCATGGCAAGCCTATTCTGTGTTAACAAGGCATCGGCTGATAAGCAAAA  
AACTGTGGAAATTGGCGCTGAGCTGTTTGTGGGTAATCTTGATCCTATGGTTGCCGAGCAGGTTCTCTTTG  
ATACGTTACAGCCGGTTTGGCAATCTTGTCAATCCGCCTAAAATTGCCCGTGATGACAACAATCTCTTAAG  
GGATATGGATTTGTTTCTTTTGGCGATTTTGAATCCTCGGACGCGGCTATCGCCAACATGAATGGCCAGTA  
CCTGATGAACAAACAGGTTTCTGTACAGTATGCATACAAGAAGGATGGGAAAGCGAGAGACATGGTGATG  
AAGCAGAACGAATGCTGGCAGCCCAGGCTCGCAAGCATAATGCACAGCCACCCACTCAGCAAGCTCCGCAG  
TTCCCTGGCACTGGCCCGGGCGTATCATCAACGCGGCCATGTCGAATGGCGACATCTCTCGACCCTTGAG  
CACAGCCCCGTACAAACACCCGATGTAGGTATGAATCGGGGTGTGACCCAGCCATGGCTCCAGCTATGC  
CTCCAGCTTTGCCCTACCAGAGTGCGCCTCCTCCAATGCCTTACCAGACCGTTCCCCCTCCAAACCGACAT  
GTCCCACCTCCCGTCCCTTCACTCAATACGCCACCTCCGGGGCTCCAGCTCGGCCTCCGCCTTCCCAAGC  
TGGCTACGGCGGGCCACAGACCTTTTTACCACCTGGATTCAATGGTGCAGGCCAACCGCCCTTCATCCAC  
AGGCTGCACCTCCCCCTGGGTTTGGGCGCGCCGATTGGACCTCCATCTGGGGCCCCCTTCATTGCCACCG  
GGCTTCCAACAGCCCGGATACGGAGGCAGTCGG

**SEQ ID NO. 66**

MSNARHWEQDKEATVYIGNLDERVSDSLVWELMLQVGRIVNVHLPKDRVTQLHQGYGFVEFISEEDA EYAS  
KIMNGIRLHGKPIRVNKASADKQKTVEIGAELFVGNDPMVAEQVLFDTFSRFGNLVNPPKIARDDNNLSK  
GYGFVSFADFESSDAAIANMNGQYLMNKQVSVQYAYKKDGKGERHGD EARM LAAQARKHNAQPPTQQAPQ  
FPGTGPGVSSTPAMSNGLISRPLSTAPSQTPDVGMRGVT PAMAPAMP PALPYQSAPPPMPYQTVPPPNRH  
VPPVPVSLNTPPPGLPARPPPSQAGYGGPQTF LPPGFNGAGQPPFIQAAPPPGFGPPGFPSPGAPSLPP  
GFQQPGYGGSR

**SEQ ID NO. 67**

ATGGTTCTTCTCAAAAAGCATTGAAAGATGTCAACCGTGAGGATCAGAGGCAAATGCCGAGGCAACGGCT  
GCCATCTATTCAAGAAATATTTGGGGAGACTTTTCTGGCGATTCTTCAAATCCATCATATGCACTGCCTT  
CTCACACAGACATGCCGCTCCACCGGCTTTGCCGGCTGTGTATGAAATTGCCATTCAATCGAAGGGGCT  
CCGTCAAATGAGCAAGGTTTATTACCCAAAATTTCAACAGTGGAGAGATCTTTGGGCATTATCTCTCCCGT  
CAATGAGCTCCAGCATCCGGAGGTAATACGCCCGGAAAATCCATCCTTCTCTCCGAACGGTTGTTCTCTTA



ATGGAGCCCAACGAACTTTCCTTCCTGCTCAAGATGGTCCAGCGAACCTCACAAGAGGGCCAGCCCCGGGC  
AAACGGCATCAGCGATGTCGCAACCCCGTATATAGGCTCCGCACCCGAGCACATCATGTCGTTTCGATATCA  
AGGATGTCGTCGACATTGCCGTTCCAAACGTTACCAAGCTGAAGTTTCAGCCAAGGAACCAAACGGTGCT  
TCCCAGGGTTTCAGGACAGACAGTATATCTCCGAAACCTAGCCATGCGAGAACGCACCTTGCAGCGCTG  
5 GGAACCGGCTGAGACTGACATTGATATGTCACTCGAAACGAGCAATACTTCTCGGGATGGGATCAGTTTG  
AGGCAAACGAGCGCTCTTTTCGGCGCCAAGACCAACTACGATGAGAACATCTACACCACTCGCCTGGACCGT  
TCGGATCCCAACTACAAACAGAAGCAGGCGGAGGCAGCTCGGATCGCCCGTGAGATTGAGGGACAAGATGT  
GGACAACTCCACATGCGCGAGGAGCGTGGCCTTGTAGCACCCGATACCGGTGACCAAGACGAAGAAGACA  
AGTACAGTGGTGTTCGCGCGAAGACAAAGCCTTCCCTCCCTGCTTTCCGGCCAGCCAAACAAGTACATG  
10 CCCCCCGGACGCCGACAGGCAGCCCCACAGTCTACTGCGACTCCAGTGCATCCACCAAACAGCCTGTTGC  
TCCGGTTCCACCGCTCCTATCCCCATCCCTCTCAGGCCGTGGCGAAGGAACTACACCAGCAGACCAGC  
AACTGAGCTGGTCGCTCTCTGCAACCCACAACAGATACCGAGCAGAAGAGTGCCCTTAGGCAAGGGTGTC  
ACACCGCCAGTATCTACTGCATCCCCCGCACCAGCTGGAAAGCGGACTGCACCTGAAAAATGCGACCGCAA  
CGTGGAGGTGGAGGTGCTTGATCACTTCCGGCAGTTCGCAATAGCGAGAAAATCAAGATGCAGGAGCGCC  
15 GTCGCAACCAGGCCTCGTATGACCGGACCATGAACTCAATGAGCTGATGAAGTTTTCCAAGAGCTTCAAA  
CTCTCCACTCCGGTGCCGAAAGATCTTGTTCCATCTAGCCAAGGACCGACTAAAGCAAGAAGCAATCAT  
GCAACGAGCGCTGCAACAAGGGGACGACAAGGCTACGCCGAAGGTCACTACGCCCTCCACAGAGCAACAAC  
CGCCTACTCGTGGTGCCGGACCTAGTGGAGCTGTGCCCCATCCGCACCCGCTGATCGTCAAAACTACAAC  
CGCACTCGTCAGGGTTATCCTCCAGCTGGTCCGCTCGCTGGTGTGGTGGCAGATTCCCTCAGCAAGTTCC  
20 ACCGGGACGTCCTGGTGTGGCATGCTCAGTCACCGACTAGCGGACAATCTGCAGCAACGAAAGGGCGCGG  
GTATGGGACCTGTTCCCACTCCTCTTCCATTCAAGATGCCCGTGGACCCCGACTGGTCTGCCAGCGAT  
CAGCAGAGAATCACAGCCCTGTCAAGTCGACGGCCGGCTTCTCTGCGGCAACCAAGTTAATGTTAAAGC  
TATGGAGTTCAAGCCAAACCCGAGCGAGCACTTTCAACCCCTGGTACCTCGGGAACGCGCAAGCCAC  
GGCCTTTCTCTCGCAACCGCTCCGTGTACGCGCCACAACCCGACTGCGTTCTTTGGCTCAAGGAAGCCA  
25 CTGCTGTCTCCGAACGACCCTCGATCAGTGACCAATTCAATCCCATCAAGCGCATGAAGAAGGAGCACGC  
AGAGACCGCTGAGAGGTTGATTATGCTGAATGGAGGTATCCCCCACCCCTACAAGACTTTGCCAATTGGG  
ACATCGCGGACGGCAGCGAAGAGAAGACGTACGATGAGATGTTCAAACAGCCCGTCGCCGTCCCACAGTA  
CCACCCAGGGTCGGTCCGTCTCTAACAACACCAATATTCCCCAGCAACATCAGGTGCCCTTCCACTTCCA  
GCAAGGTAACCCAGCCATGCCGCCATCTTCTGGCCCTTCGAATGGACCTCATGGCCTTCAATCTCAGGGTC  
30 CCCATGGCCCCCTCCCATGTGGATGATCATCACCGCATGCAGTTATCCGCGTCGAACCTCCAGGTTTTCCTG  
TCCCCGCGGATGCAACATGGATACCCATCCCTATGGCTCCCCATGCCAGCTTTCCTTCCCAACAACCGGT  
CCCGCAGTTTACGGCGGGCCCCAACCTGGCCATATCAGACCTTTCAGGGTGGTGGTCCCTCAGTTTGTGA  
ATGGCGCTCCTATGATGGTGCAGCAGGCCTCGAATGGACCCTACATGGGAGTCCCGCAAGGCATGTCTCCC  
TATAACGCACAGATGCCAATGTACTCCCCGAACCCAGGCCACGCCTATCCCCAACATACACCCAGCCTCA  
35 TAGTGGGTACCCAAGCCCCGAGCGTGGTGGCGCCATGATGATGACACCAAGTTCGCAATCTGGACAGCCTC  
CTCAATCAATGATGTTTATGCGCGGCCAACCCGGTTACCCTCAGCAGTCGGGACACATGCCCTCCCAACCGT  
GGCAACTACCCACAGCAGCCTCACTTTTCTCAAGTCCCCATCAATCGCATCATTTCCACCTAACCCAGCA  
TCGGACACCCAGCAACGGTTTCAACCAATGCCTCAAATGCCACCCAGATGCCTGCCGCTACCCAGCAA  
CAACCCCTGGAGCTTCTCACCCGGCCGAGGCAACGGATGAAGGAAA

SEQ ID NO. 74

MEPNELSFLLKMOVQRTSQEGQPRANGISDVATPYIGSAPEHIMSFDIKDVVDIAVPNVTTAEVSAKEPNGA  
SQGFRDSDISGNLAMRERTLQRWEPAETDIDMSLETSTNTSAGWDQFEANERLFGAKTNYDENIYTRLDR  
SDPNYKQKQAEAAAREIEGQDVDSNHMREERGLVAPDTGDDQDEEDKYSQVRREDKAFPLLQSGQPNKYM  
45 PPGRRQAAPQSTATPSASTKQPVAVPTAPIPIPSQAVAKETTPADQQTELVASLQPTTDTQKSALGKV  
TPPVSTASPAPAGKRTAPENATANVEVEVLDFRQFANSEKIKMQERRRNQASYDRMTKLNELMKFSKSKFK  
LSTPVPKDLVPIAKDRLKQEAIMQALQQGDDKATPKVTTPTTEQQPPTRGAGPSGAVPPSAPADRQNYN  
RTRQGYPPAGPLAGAGGRFPQQVPPGRPGVGLSHRLADNLQQRKGAGMGVPVTPPLPIQDARGPPTGPASD  
QQRITSPVKSQAGSSAATKFNVKAMEFKPNPAASTFTPGTSGTAASPRPFSRNRSVSRATTPTAFFGSRKP  
50 LPVSERPSISDQFNPIKRMKKEHAETAERLIMLNGGIPPPYKTLPTWDIADGSEEKTYDEMFKQPVAVPTV  
PPQGRSVSNNTNIPQQHQVVPFHQQGNPAMPSSSGPSNGPHLHLSQGPBGPSHVDDHHRMQLSASNSQVFP  
SPRMQHGYPSPMAPHAQLSFPQVPVQFYGGPQPGHIRFPQGGGPQFVNGAPMMVQQASNGPYMGVPQGMSP  
YNAQMPMYSNPNPGHAYPQHTPQPHSGYPSPSRGAPMMHONSQSGQPPQSMFMPPGQPGYPQQSGHMPNPNR  
GNYPQQPHFSSSPHQSHHFPNQHRTPSNGFNQMPQMPQMPAATPATTPGASHPAEATDEGK

SEQ ID NO. 75



FANKGADSFVDPSLIPLQQQSNLSTPAISYPEQTDYSLVPGGFFPQSPDPSQFQFADPYG  
PFTQQPCPMPPASSPSLMPSHVPPRRLSLYDRRSSVSSVQSRRLSPLAASNAEIEEDA  
KGRCPHPDCGRVFRDLKAHMLTHQSERPEKCPIVTCEYHTKGFARKYDKNRHTLTHYKGT  
MVCGFPCPGSGSPA EKSFNRADVFKRHLTSVHGVEQTPPNCRKRSP

**SEQ ID NO. 79**

ATGGAGACGTACTACGGCCATGTCCGCACTCCTGCGGACGCCATCATCCTCTTCGAGGCCTGTGCGATTGG  
TCTTCTCCCTCGCGTCCAGCGTCTGACTGTCCGAGAAAGAACGGCAGTTGATCCGCTCTGGGTCCGTCTTTG  
TCTGGGATGAGCGAGAAGCCGGCATGCGCCGCTGGACGGACGGCAAGTCTGGAGCGCCAGTTCGCGTGTCT  
GGCAGCTTTCTCACGTATCGCGAGATGGAAGGCAAGCGAGGAGGCACCGGAGTATCGCAGAGCACCATTCC  
GCGAGCCGGGAAAACCTCCCGAGAGCACCCGCGGCAGTGACGACGACCGCGGCGATGGCGCAGACGAAGGCC  
CCGATGGCTACCGATATAAGCCCGACGGCTTGATGAAGCAGTCCCTTCAGTATCACCACCTCCGCGGCCAA  
CACCTCCATCTCATCAGCTACTACTCGCGTCCCATCCGCTCCGCGGCCAACCTGCAACAGCCCCACCAACGA  
TCCCCACCTGCGCCATGTTTCGACCCAGAAAGGCCTCTATCCCGAATCCACGGTCAACGACCCAGAGAACC  
TGCCCGTGTGACTCGCGGCCCATGGGCGGTGCTTACTCCGTCCACCACCCCATGCCTCCCTACGCTCGC  
TCCGCGCGCCACGCATCCGCAATCATACTCCGCCCTATGCCTGGCCCCCGACGCGCTGGCCACCCCGCC  
CGTCACCGTCCATTACTCGCCATACCTCCCGCCGCTGTGCGGCGCCAACGGCCAACCTCTACGCTCATCATC  
ATCAACCCCGCACGCGCGGGCTGCGGCCCGCCCCCGCGCAGCCAGGCTGTCCGCGCCTACGAACGC  
CCCGTGACCCCTATCGAGAGCGCTATCGCGCCGCGCCCATCCATGCCTCCGGCGTCCACCATCCTGCGCT  
CCCTGTGATCGCGCGCGCTCCCGCGCTCTCGTCGCGCAGCCACGACGTCCACCAGCGCAGCCCGCCG  
CCTACGCGGCCACCGACCCCGCGCGCCTCTCCGCGCACCAACCGCCCCCATCCCCGCAACAAACGGC  
TACGGCCCGCGCGCACGCAGCCAGCCACGCTGACCCAGCCGCGCGCCACCGCCGCGCGCGCGCGCAGCA  
GCAGCAGCCTCCATCGACATCGGCTCAAATCCCGCGCCCAAGCTCGCCGAACCTCCACCACGGGGACCA  
CGGTACCCAGCATCGGGGCCCTGATGAACGGCGCGCGCAGCCGCGCGCGGCTGCCCTCCATCACGGCCACG  
GCAGCGTCGACCGCGCGCGCGCGCGATATCCCGAGCGAGAAGATCGGGTTCGGCGCGCGAGGA  
TATGCGCGCGCTCCGACAATTGACCGCGTGTTCACGGCG

**SEQ ID NO. 80**

METYYGHVTRTPADAIILFEACRIGLLPRVQRRLESEKERQLIRSGSVFVWDEREAGMRRWTDGKSWSASRVS  
GSFLTYREMEGKRGGTGVSQSTIPRAGKTPESTRGSDDDRGDGADEGPDGYRYKPDGLMKQSFSITTSAGQ  
HLHLISYYSRSHPSAANLQOPTNDPTLRHVRPQKGLYPESTVNDQQLPVPVTRGPMGGAYSVHHMPMPYAR  
SGATHPQSYTPPYAWPPTPLATPPVTVHYSPLYPPVSGANGQLYAHHHQPPHAGLP PPPPPQPLSAAYER  
PVHPIESAIAPPAIHASGVHHPALPVIAGRSPRLVADAHVHQRSPPAYAATDPRRASPTQPPPIPATNG  
YGPAARSPATLTQPPPPPPPPPPQPPSTSAQIPPPKLAEPSTTGTTPVPSIGALMNGAAAGGGLPSITAT  
AASTGRADGPRDIPSEKIGFGGEDMRALRQLDRVFTA

**SEQ ID NO. 81**

ATGTCGTGCGCCCAAGGATTCCCAGTACGACACAACCCCTCGGCGCCATCCCCGCGGAGGGCTGCTTTGTC  
CACTTCTCCTCCATCTTTACTTAATTCTTCCAACGTGCGATCTGTGACTCGAACCCTCAAACCCGCTGT  
TCAGAAAGAGCGAAACCTTTTCATGCAGCGAGAAACCGTCCACCCACGCGATCCTCGTCTCAGCTTGCCT  
CTTGACCCCGCGCTCTCCTACATCTCCCGCTGCCCTCGAAGCCATCGCGGCCGCGCAGAGAGCGCATGAG  
CAAGATCCTCGATACCCTCGACCTCGATACCTTCACTCCCTCGGAATCCGTTGATGAGGAACTCCCCGTGC  
CCCGCAGTGTCTTGCAACTTCATTTGACTCTTTGCATATCTCGGACCCCTCCCCAGAGTCCGTCCGTCCGT  
TCAGTCCCCAAGAAGCCGCTCCAAAGAGTCAACCATCACACTTCCGACAGCGGTCTCGGGACCTCTGTTTG  
TAGCGAAGAAGCGCTGTCTTGTAACGAATCCGCCGATCTGGACTCGAACGCCCCCATGTCCGCCTCACATC  
TTCGGAAATTGTGCGCTGACGGGGTCGACAAGATAGAGCACCGTGTCTTCTACCCTCTTCTTATGAACACG  
CAGTTTCGATAAGTTCCACAGCACTGTTTCGATATGCCGCTCAAGGGGTCAAGGACAATCGATTCCGCTGTCT  
CCGTGACGTGGAAAATTTATTCCGCAATCCATTCCCTATTGACCATGTTAATGAGAAGGAGGAATTTCTC  
TTTTCTGAATCAGGTGGTCTGTGCCTCGACGACACTTGGCACCGCCTCGATGAATCGGACCGCACTATG  
CCTGGTGATGTCCCGTACTCGAATGAGTACATCCTCGACCTTTACGATCAAATCGTCCGCTTCAAGGCGCT  
CTGTGAGCGAGCGAAACAGACTCTCTCGCAGACGGATAGCAACAGTGCCACCCCAAGTTGCCAAGCTCG  
TGTTCAAAGGCGGCTTGGCCAAAACAGGACGCCAGGCGGAACCTGGTCGCTCAGTCCGATGACCAGATGATG  
TCGCTCCGCACGGGTAAACCCTACCAGGAGAGCCAGGTGCCGAGCATGAAGCGTGGCCTCAGCCTATGCTC  
GACGGATGGAGAGGGCGCCACCGATGCATGGCCCGCGCGCGAAGAACGAGGCTCCCATGAACATCAACA

1003190123221

CTCCGTGCGACTTTTTCGCGGGCAAATTTTCGCGAGACCCTGTGACCTCACTAAACACATGAAGACCCACACA  
CGCCCGTTCAAGTGTTTCGGTGCCTGAGTGCAAGTACTACACCTATGGATTCCCGACTGAAAAGGAGAAAAGA  
CCGTCATTTCAACGACAAGCACAACCCCGACCCGGAACCGTACGAATGCGATCTGGGAGGATGCAATTATC  
GCTCTAAGCGGTTGAGTAATTTGAAGCAGCATAAGGAGAAGAAGCACGGCTGGCAATACGTCCGGACCAAG  
AGCAACGGCAAGCGCAAGGAGAAGGGCAAGGGCAAGAAAGCCAGTCCTCAGTCTACTCCGGATACTCCCGG  
CCTTACCACTCCCGGCACCAGCACCAGCGCAGTCCTTCTCGACTCCGAACACTGGACCCAGTCCGTCCCCC  
CGCAGGCAGTCTCCCGACCTCTGCCGACTACCGACTTCAACTTTGCTGATCCTCCGTGCCCCACCCCGGTT  
GCGGACTTTCCAAGTGTTCACGCGAACAGCCCCATGGGAGGGAACGGAAGCGTGAACATGGGTTATGCGGA  
TTTGGGCTTTCCGGAAATGACTCGGTCAATGGACGGCGACGTGGTTCATATGAACAACCTTTGAAGACATGT  
TCGCCAACGTCAACAACCCCTTACCTGGATGGACTCAGCGGGGGTTATCAAGTCCCCAGCGGCTATGAAGCC  
GGCAACATTGACTTTCCGGATCTGGGTATGGCACGGCCGTGCCTCCGTCTGCGGTCTTCCACGAAGACCA  
ATTCTTGCCGGAGACGATCAACTGGGAAGAATTGCCATGCTTAACGGAATGGATACGATGTCCAAG

**SEQ ID NO. 82**

MSSPKDSQYDTTLRRHPRRRAALSTSPPSLLNSSNCRSVDSNPSNPLFRKSETFHAARNRPTPRDRLSLP  
LAPRRSPTSPAALAEIAAGRERMSKILDITLDITFTPSESVEELPVPRSVLQLHFDSLHISDPPQSPSVR  
SAPKKPLQRVNHHTSDSGLGTSVCSEEALSCTESADLDSNAPMSASHLRKLSPDGVDKIEHRVFPYLLMNT  
QFDKFHSTVRYAAQGVKDNFRCLRDVENLFRNPFPIDHVNEKEEFSLFNLQVVLCLDDTWHRLDESDRTM  
PGDVPYSNEYILDLYDQIVRFKALCERAKQTLSTQDSNSATPKLPKLVFKGGLAKTGRQAEVAQSDDQMM  
SLRTGKPYQESQVPSMKRGLSLCSTDGEGAHRCMARRRNEAPMNINTPCDFCGQIFARPCDLTKHMKHT  
RPFKCSVPECKYYTYGFTEKEKDRHFNDKHNPDPEPYECDLGGCNYRSKRLSNLKQHKHKGWQYVVRTK  
SNGKRKEKGKGGKASQSTPDTPLTTPGTSTAQSFTSTPNTGPSPPQAVSRPLPTTDFNFADPPLPTPV  
ADFQLFNANSPMGGNGSVNMGYADLGFPEMTRSMGDVVMNMFEDMFANVNNPYLDGLSGGYQVPSGYEA  
GNIDFPDLGYGTAVPPSAVFHEDQFLPETINWEEFAMLNMGMDTMSK

**SEQ ID NO. 83**

ATGGTCAACACCCACCCGATCAACGGCCCCAGCTCTCCCCGTCCAACCCCAATCCCCCGTCTCGACGACG  
CAATGATCGCGACATCTACGTGCGCGATGCCAGTGAGCCCGCCACCCCGCGCCCCATGGACGATACCCACC  
CCGCCGCCGCCACCGCCCGGTTGCCCTGGCCCAATTACACCACAATCGCTTGGTCTCCGACTGGGAGACG  
GACATGGAATCCCCTCCGACAATGACATCGACCCGCGACCGCATGCGATCCTCCATCGAGCTCCCCCTCTCT  
GCGCGACCACTTCAAGCAGGACTCCCTCCACCTCTCTCCCCGCGACCGCGGAACTGCTCCCCCTCATCC  
TCAACCACTCGCCCCCAGGTCGCTCCTCCACTCTTCCCCCATCCAGCAAAAGAAGTGCCCGCGCCGCGC  
AAATCCTCCATCTCCGGCGCTCGCAAGCCCAAACATGAACGCTCCAAGTCCAAGGAGTACGGTCGCGCGCC  
CAGCTTAGCGCATCGCAAAGCCCTGTCCGCCGAACCCAGACCGCCGCTGGGCTCAGGGCAAGCGCTGGG  
AGGATCTGATCGAAGCCGCGACTTCGGCGACCGAGGCCGACGACGAACGCCATTCTGAGGTCGGTCGGTCG  
CCCACCATCCCTCCGGTGTCCAGCTTACCTCCGCCCCCATGGGAAGAATCGCTCGTCGCTTCCCCCGGG  
ATTCCAAGGACTACCACCCCCACCTCGCATCGTCCGTCCCGCCTCATCCCTACGCCGCGTCGCCGTTGA  
ACAACGACCTGGAGCCCTTCCCCTCGATAGAGTCGTCCCTCGACTCCGCCTCGACCGCGTCGGGAAAGACC  
CTCCACTATAATCACGTGCGTCCGGCCAACGACTCCAGTCCGGTGCTGAACATGTTCCCGTCGTGCGCCGT  
GCAGCGCCAACACCATCGCTTTTCCAACCCCAACCCCGCCTCCATGCGGAGCCGCGAGATCCAGATCTATT  
GCGCCCACTGCAAGCGACCGTGGGCGCTCAACGAATGCTACGCCTGCACCGAGTGCATCTGCGGCGTCTGT  
CGCGAATGTGTGGAATGTTTCATCGGCAGCCCGCCACCTCCTTCCGCAACGTACCTCCAGCCCGGGCAG  
TGCCTTGCCCCACGGCCCCGACGACTATCCTAGCGCCCGAGGTTGTCCCCGCTGTGCGACCGTCGCGCGCA  
AGTGGAAGGCTTTTCAGCTGGATTTCAGTAG

**SEQ ID NO. 84**

MVNTPPDQRPQLSPSNPNPPSRRRNRDRIYVADASEPATPRPMDDTHPAAATAAVALAQLHHNRLVSDWET  
DMESHSDNDISRDRMRSSIELPSLRDHFQDSLPPFSPRPRELLPSILNHSPGRSSTLPPIQQKKWPRPR  
KSSISGARKPKHERSKSKEYGRRPSLGDRKALSAEPQTAAWAQGKRWEDLIEAATSATEADDERHSEVGRS  
PTIPPVSSFTSAPMGKNRSSLPFGQLPPPTSHRPFPPHPYAASPLNNDLEPFPSIESSLDASTASGKT  
LHYNHVGPANDSSPVLNMFSSAVQRQHRFSNPTPASMRSEIYQIYCAHCKRPWALNECYACTECICGVC  
RECVGMFIGSPPTSFRNVTSSPGSALPHGPTSYPSARGCPRCRTVGGKWKAFQLDFK

**SEQ ID NO. 85**

ATGCTGGACATTCCGAAGGACATCGAGAAGATCTCGATCCCTGTGAGCTTTGCCTTGGGCGAGCATGACAG  
CGCAATCAAGCCGGCTCAGGTCACTCAGATCAAGCAAACCTCTGAATGCAAAGGAAGAGAATGTGGCTAGTG  
AAGTGAAGATGTATTACGGTGTGGTACGGCTTCTGCGTGAGAGCGGATACCAAACCTGGTGGACGCAGAC  
ACACAAGCAACTGAGGCAGAGAATCAGGCCCTGGCTTGGTTCAATCGTCATTTGCGGGACTTTTCATCC

**SEQ ID NO. 86**

MLDIPKDIEKISIPVSFALGEHDSAIKPAQVTQIKQTLNAKEENVASEVKMYYGVGHGFCVRADTKLVDAD  
TQATEAENQALAWFNHRHFADEFSS

**SEQ ID NO. 87**

ATGTCTAGCCAACCTCTCCTCCAAACCGCTCCGGGCAAGCGAATTGCCCTCCCAACCCGAGTCGAACCCAA  
GGTCTTCTTCGCTAACGAGCGCACCTTCCTCTCATGGCTTAACCTCACCGTCATCCTGGGCGGCCTAGCGG  
TCGGCTCCTCAATTTGCGCGACCGCATCGGTGCGATCTCCGCAGCTCTCTTCACCATCATCGCGATGGGC  
GCAATGATCTACGCCTTGGTGACATTCCACTGGCGCGCGCAGAGTATCCGTCGGCGCGGACAGAGCGGTAT  
CGATGACCGATTCCGTCCCTACCATCCTGGCCATTGCCCTCCTCGCCGCCGTCGTTGTTAACTTCATCTTGC  
GGATTAAGGACGGGCAGATGAAC

**SEQ ID NO. 88**

MSSQPLLQTPAGKRIALPTRVEPKVFFANERTFLSWLNFTVILGGLAVGLLNFGDRIGRISAALEFTIIAMG  
AMIYALVTFHWRAQSIRRRGQSGIDDRFGPTILAILALLAAVVVNFIILRIKDGQMN

**SEQ ID NO. 89**

ATGCATGATGACTCTGAAAAAGCGGCCTGCAAATCCAAAACGTCGAGACGGGGGGTGGCTAGAGGTCAC  
GAACTCCGGGACGCGAGTCCAGTGTGGGATGACGGAAGTCGGTAGCGAGACGGTCTGGGATCTTGTCTTGC  
TTCTTACGCCATCGTCCCTGCTTCAAGGGTTGGCGGGCACAGGGGCGGCTTCTCGTGGTGGCTCTAGCCGC  
TCGTCGCGCCCTCGTGGGCGACGGGATGACGATGAGGATACGAGGAAAGACTCTGACTCCTCTGTATTGGA  
ATATAGTGATGACTCTTGTGACGATGGGTGGACGATTAGGGCAGACCCCGTTGTGAGGCATCGAGACGGCC  
TGGCGCATCAGGACATTACCATGCGCAAATGC

**SEQ ID NO. 90**

MHDDSGKSLQIQNVETGGWLEVTNSGTRVQCGMTEVGSETVWDLVLLPTPSSLLQGLAGTGAASRGSSSR  
SSRPRGRRDDDEDTRKDSDDSSVLEYSDDSCDDGWTIRADPVVRHRDGLAHQDITMRKC

**SEQ ID NO. 91**

ATGATCTCCGCTCCGGGTCCCGAGCGACGGCGCAGACGGCCGGCAGTGTATGTTCTCTTTGCAGAAGGCG  
TAAGATTAAATGCAACCGCGAAAGCCCTGTAGCAACTGCATCAAGTCTAAGGCGGAACCATGCGTCTACG  
AGAGCGACTCCTCGTCCCGGCCGAGCAGCATCTTGGCTTCAATCAGACACTGGAGCTAGGGCTCTGCAAG  
GCGTCTGAACGCCAGATGCTCCCTCCAGATGCGGTAACCTTCTCAAGTTCCTAGCTATGCGTCCAGGTCATT  
ACTCTCCAGCGCAGAGACTCGTCATCCCGGACGAGTCAAGCTTCTGCATCGGAGGTTGAGTCTCTGAAGA  
CCAAGATCAGACAGCTGGAGGAACAGCTGTCCAGTGCAGCGCAGCCGGCGGAATCACCTCCACGGCCGTCT  
CCAAACTCCAGAATCGAGACCAGCACGTCTCAGATAGCAGGGACGTTCCACATAAACCATGAAAGGCGGCT  
TCTCCACGATTCCAGTTCGTCAACCGAAATCTGGTCATACATAAAAGTCGCCTGTTTGGCTCCAGTCATT  
GGGCACAGGCTGCATCGATGTTTAGAGATGTATTTGAAATGATCGAACCCTTTATCCGCGGGAGTGGTTCC  
AAAGCCAGTGCCGGCATCAGAAGGTGCAAAGAGCTGGCAAGGATTATCAAAACCCAACGGACGCCGCAATG  
GCCGACGCCGCCACTCAGGATCTACCTCCAAAAGGCGTCGCTGATGAGTTGGTTGACTGCTATCTCCGTA  
CAATCGAGACTACATTCCGGGTCTGCACGTACCTACATTAGGTCCGAATATGACGCTCTATGGGTATCT  
GAAGCACGGCCCAGCATCGCGTTCACAGTCCAACCTTAAGCTGGTGTGGCACTGGGGTCTGTCACTTACGA  
CGAGCGGTTTTCAATGAGACCCAGTGCAGTTCGTTGGGTATTTGAGGCGCACACCTGGCTCTCTGATCCAG  
ACTTCAAACCTCAACTTAACATACAGTGTGTTGCAAAGCAGGATTCTACTATTACTAGCCCGGAGATAATC  
AATGTTGGTGGCGATTTCGAGTTGGATATCTGCCGCGGACTACTCCGCACTGCTCTACATATGGGATTACA  
TAGGGATCCGTCTGTACTGCCGCTAGGTCCGCGCTCGCTGTTGAAATGCGACGCCGACTGTGGAACACTA  
TCCTCGAGCTATCACTGCAGTCAAGCATTTCTCCGGTGGACCTCCACTAATTTCCCTGGGCGATTTCGAC  
TGTGCGCCTCCAGGGAATTTGACGACGAACAGCTACTGGCTGAGGACCCGGTGCCGAAGAGTGATGATGA  
GTACACTCAAACAGCAATCGCCAGGGCATTGAGGGGAACCTACCCACAGCGCCTTGCAATTGTGAAATTCC  
TGAACGATCTAAGTTCATATGGGACTTACGAGGAACTCTTCGACTTGACGCAGATTTAAGGGAATCTTAC  
AGGGCTATTTGCCGTATCCTCCGAGGGTATCCAGCAACGGGCCCTTCCCCGTACAGTTCGAAAAATGCAT  
GCTCGACTTCATCATCCACTTCTATGTGTGCTGCCTCCATATTCCTACATCGAGAAGTCACTGCGGGCAC



CGGCATATGCATTCTCCAGGAAAGTCGCGATCGAGAGCGCCCTCAAGATGTGGTGCGCCATTTACCCATCT  
TCCAGATTTCATGAGCAACACCCGTCGCGAGATTAGCGGATCCGTTGAAAAATAAGCTGACTCGGTTTCGTGGA  
ATGCGGGTTTGGGTTTTTCCGCACTGGTGTTATAATCGCGGCCATGTTTCGTGACCTTGGAGCTTAAAGCTC  
AGCTCCTGGATGATGACAGCCTAGGTCCCAGCCCGTATCGGGTAGATCTTTTCTCTCTGCTCTGTGAGGCG  
5 AAAGACCGTTGTTGGAATATGATTCAATGTGGTGAGACTAATGTCAAGGGCTACCTCCTCATTTGTCTGGT  
AACC GCCCAGATCGAGGGGCTGATGCATGGAGTTGAACCGAGCAAACCTCCCGAACTCCTTCTCCGCGCAG  
CAGAAGAGGCGGAGGACCGGTGTCTTGACTTCATGGAGGAGAAAGCCGATCTGGGACGGAGTGGTGGTTCC  
GTTGAGGTGATGGACGAATCTGCGAATACAGCGCCCTTCATGGGCGACTGGGAGTTTATTATGACAGATCC  
10 TTTCTTAATTATCCTGGGACTACTGAACCACTCAGCTGGGTATGAATGAAGAAACGAGACCATTTCATAA  
TG

**SEQ ID NO. 92**

MISAPGPERRRRPAVSCSLCRRRKIKCNRESPCSNCKSKAEPVCVYESDSSSRPQQHLGFNQTLGLGLCK  
15 ASERQMLPPDAVTSQVPSYASRSLSSARDSSSRTSQASASEVESLTKIRQLEEQLSSATQPAESP RPSP  
PNSRIETSTSQIAGTFHINHERLLHDSQFVNRLVIHKSR LFGSSHWAQAASMRDVFEMIEPFIRGSGS  
KASAGIRRCKELARIKTQRT PQWPTPPTQDLPPKGVADLVDCYLRTIETTFRVLHVPTFRSEYDALWVS  
EARPSIAFTVQLKLVLALGSVTYDERFSMRPSAVRWVFEAHTWLSDPDFK PQLNIQCLQSRI LLLLAREI I  
NVGGDSSWISAGGLLRTALHMG LHRDPSVLP PPSALAVEMRRRLWNTILELSLQSSISSGGPPLISLGD F  
20 CAPPGNFDDQLLAEDVPKSDDEYTQTAIARALRGTYPQRLAIVKFLNDLSSYGTYEETLR LADLRESY  
RAICRILRGYPSNGPSPSQFEKMLDFIIHFYVCC LHIPYIEKSLRAPAYAFSRKVAIESALKMWCAIYPS  
SRFMSNTRREISGSVENKLTRFVECGFGFFRTGVIIAAMFVTLELKAQLDDDSLGPSPYRVDLFSLLCEA  
KDRCNMIQCGETNVKGYLLICLVTAQIEGLMHGVEPSKLPELLLR AEEAEADRCLDFMEEKADLGRSGGS  
25 VEVMDESANTAPFMGDWEFIMTDPFLNYPGTTEPLSWVMNEETRPFIM

**SEQ ID NO. 93**

ATGACCAGCACAATAGCCCGCACTGAGGAACGCCAGAACGCTGGCACCATTGAACTGAAAGATGACACGGT  
CATCGTGGTCTCTCGGTGCCTCCGGAGATCTCGCAAAGAAGAAGACGTTCCCTGCACTGTTCCGTCTTTACC  
30 GTAACAAATTCCTCCCCAAGGGGATCAAGATCGTCGGATATGCTCGGACGAACATGGACCACGAAGAATAT  
CTGAGACGGGTGCGCTCGTACATCAAGACCCCCACCAAGGAAATCGAAGAACAGCTGGATGGCTTCTGCCA  
GCTGTGCACCTACATCAGCGGCCAATATGACAAGGATGACTCGTTCATTAACCTCACTAAGCACCTCGAGG  
ACGTCGAGAAGGGCCATAAGGAACAGAACAGAGTCTTCTACATGGCGCTGCTTCTTAGCGTCTTCATTACC  
GTGTCGGATCAATTGAAGAGAAACTGTACCCCCAAGAACGGCATTGCCCCGATTATTGTGCGAGAAGCCCTT  
35 CGGCAAGGATCTCCAGAGTTCTCGTGACCTCCAGAAGGCCCTTGAGCCCACTGGAAGAGGAGGAGATCT  
TCCGTATTGACCACTACCTGGGTAAGGAGATGGTCAAGAACATCCTCATCATGCGCTTCGGAACGAGTTC  
TTCAACGCTACCTGGAACCGTCACCACATTGATAACGTGCAGATCACATTCAAGGAGCCGTTCCGCACGGA  
GGGCCGTGGAGGCTACTTTGATGAGTTCGGCATCATTCGTGATGTCATGCAGAACCACCTTCTGCAGGTGT  
TGACGCTTCTTGCCATGGAGCGTCCCATCTCTTTCTCTGCTGAAGACATTCGTGACGAGAAGGTGCGTGTT  
40 CTGCGCGCGATGGACCCCATTTAGCCCAAGAACGTATCATCATCGGCCAGTACGGAAAGTCGCTCGACGGTAG  
CAAGCCCGCTACAAGGAGGATGATACTGTGCCTCAAGACTCGCGCTGCCGACTTTCTGCGCCATGGTTG  
CGTACATCAAGAACGAGAGATGGGATGGCGTTCCTTTCATCATGAAGCCGGTAAAGCCCTGAACGAGCAG  
AAGACCGAGATCCGTATCCAGTTCGTGACGTCACTTCCGGCATCTTCAAGGACATCCCCCGCAACGAACT  
45 TGTCATTTCGTGTCCAGCCCAACGAGTCGGTGTACATTAAGATGAACTCGAAGCTACCGGGTCTCTCCATGC  
AGACGGTTCGTTACCGAGCTTGACCTTACCTACCGCCGCCGTTTCTCCGACCTCAAGATCCCGGAGGCCTAC  
GAGTCTCTGATTCTGGATGCTCTGAAGGGTGACCACTCGAACTTTGTCCGTGACGATGAACTTGACTCGAG  
CTGGAAGATCTTACCCCTCTGCTGCACTACCTGGACGACAACAAGGAGATTATCCCCATGGAATACCCCT  
ACGGCTCTCGCGGACCTGCTGTGCTCGACGACTTCACCGCGTCGTTCGGGTACAAGTTCAGTGATGCTGCT  
50 GGCTACCAGTGGCCCCCTGACTTCGGCTCCCAACAGACTG

**SEQ ID NO. 94**

MTSTIARTEERQNA GTIELKDDTVIVVLGASGDLAKKKTFPALFGLYRNKFLPKGIKIVGYARTNMDHEEY  
LRRVRSYIKTPTKEIEEQLDGFCQLCTYISGQYDKDDSFINLTKHLEDVEKGHKEQNRVFMALPPSVFIT  
VSDQLKRNCYPKNGIARIIVEKPF GKDLQSSRD LQKALEPNWKEEEIFRIDHYLGKEMVKNILIMRFGNEF  
55 FNATWNRHHIDNVQITFKEPFGTEGRGGYFDEFGIIRDVMQNHLLQVLTLLAMERPISFSAEDIRDEKVRV  
LRAMPPIEPKNVIIGQYGKSLDGSKPAYKEDDTPQDSRCPTFCAMVAYIKNERWDGVPFIMKAGKALNEQ  
KTEIRIQFRDVTSGIFKDI PRNELVIRVQPNESVYIKMNSKLPLSMQTVVTELDLT YRRRFSDLKIPEAY

ESLILDALKGDHSNFVRDDELSSWKIFTPLLHYLDDNKEIIPMEYPYGSRGPAVLDDFTASFGYKFSDAAGYQWPLTSAPNRL

SEQ ID NO. 95

5 ATGACACCGACTCCCCCGTCAACCACCTCGTCCAGCGCCGGTGAATCTCACCGGAGGGCCATTATCGAGT  
CATCCGAAAGCGAAACCGGGTGCCTCTATCCTGCGGCCCTGCCGACATAGAAAACCTCAAATGCAACCGTG  
CTCATCCATGTGAAAACCTGCGTCAAACGGGGCGATGCCTCGTCTGTACCTATGCACAAGCCAACGCGCGG  
AAAAAGAACTCACCGCTTCAGACCGCTTCGAGCTCACCCGACGACATGCAAAACCGGATAGATCGTCTTGA  
GAGCTTGGTGCTCTCTTTGATGACCAATGGATCTCAGTCCGCGAGGCCCCACGGCAGCTATGGCGGTCAATT  
10 CCGGCAACTCCAGCAGCATCGGCTCCGCTCAACATACGTGGAAGATGTAGAGCTGGACGATGATGATGGG  
CAAGGTCCCGAGGAGAGTGATACGGAGCAATTGACCAAGTCGATCGGTATCATGAAGTCGACAACAACAA  
ATCGTGGTATATCAGTGATGCACATTGGGCATCGGTCTGAGCGATATAGCGGAAGTCAAAAATTACTTCA  
ACACGCACAAGAAGCAATATGAAGAACACGCAGAGAAAATTAAAGCGACGCGACTCCCAACAGATGTTCCC  
GGCTCGACCTTGCTCTTCGGTGGGACGAAAACGATAAGTCGCGAGGAAATCATGGCCTCTTCCCATCCAG  
15 GTATACTGCGGATATCCTCGTTGCGCGCTATTTCAACCACTATGACCCTCCACGCACATCTTCATGGCC  
CTACCTTTTCAGGCGCAGTACAATAAACACTGGGAGGACCCCTCCAAAACCTGTATTGTTTGGATCGGTATG  
CTTTTGTCTATGATGCGACTCGCCATGCTCTCATATCATCGCGAGGGCGACGAACCTCCGGAGTTTCGCGG  
GAAGGCGCTGGACATGGCGGGCACATACCGGAATCTCATGGCCAGTGTTTGACGTTGGCCGACTACACCA  
AACCGTACCCTTGTTTGATCGAATCTTTAGTCTTCCATCTTTACGGCGACTTCTGTGAGTCAAAGGATGCC  
20 GACGTGTCTGGATGGGTGCTGGTGGGCGTGATTGCGAGACTGGCCATGAGGATGGGTACCACCGGGATT  
GAAGATGTTCCCTAATATCACCCTGTTCCAAGTGAGATGCGACGGCGGGTGTGGGCTTTGTCCGGCAAG  
CAGACTTGCTCTTTTCTGCCAAGTCGGCTGCCAGCATGATTGCGACTTCGGATAGTGATACGGAGCTA  
CCACGCAATCTCTATGACGACGATTTTGACGAGAATTGCACGGAACCTCCACCGTCTCGACCATCTACCGA  
AACCACGCCCATCTCTTTCTTGATCGCGAAGGCCCGTATCACATATGCTTTCGGCCGCGTTATAGAAGACA  
25 CATCTTCTCTCGAAGCGCTCCATACGACAAGTTCATGGAAATTGACGAGGAGCTTCGTCCGGCAAGGGAT  
TTGGTACCAGAGCACTTGAGAGTTCGCTCTGTGCAAGAGACACAACCTGGATCCCGCAACCTTATCATGTC  
TCGGTTTGAGATCATGAGTGTGTACCACAAAGTCAATGCGTTCTCCATCGGCGATTCTCTGCCCCGGCGC  
GCGAAAACCTCGATTTACCTATTCTCGAAGAACCTGCATTGATTGCGCTCTGGAGCTACTGCGATATCAG  
TCCATGATTTCATACCGACACCCGTCCTCAACGGTTCGTCTGCGAGGGAAGCTCAACCGGACCACGTCCCTCTG  
30 TTCGAGCGACTTTCTGCTTGCCGCTACCATTTGTGTGCCTAGATCTCTATCATGGACTTCAGCTACAAGCTG  
GAGGTGCGGCTTCAGATGACACCTACACCTGGGGACGGGAGCGTCGCGACGAAATGGTTGCGGCTCTACAG  
CGCTCGAAGGAGATCTGGGACGAGCTTCAAGACGAGACCATAGACGCGTGGAAGGCTTCAGGAGTCTCGG  
CGTGATGCTTGCCCCGCTGAACCTAGACGGCAACACCGCTTCGACCACGTTGCAACCGCAAGACGAGAAGC  
AGAGTGCCGCGATGACGTTAGGCCGTGCTTAGCAGTGGCATGAATATATGAATCCAGGAACACCTGGCTTT  
35 GGAGAAGCCACAACCAAGATGGCAGATACACCAAGTCCCGCCCCGGGCGGCTTTGGTGCCGCTGATATGCC  
TGGTGCCCCATCACCTTCAGCGCCATGTTCCGACAGATGCCAGATATGCAGGTCAATTGGATTGGGACG  
CTTGGGACAACCTACATTCAAACTCCTCGATTGACTTTTCCAATCAGTGGTGGCCGGCTATGCACGCACAG  
CAAGCGCCACAGCCTCCGCAACCAGGGAACCCGCTTTCGCCATCTCAGTTGGCTGCAACACAGGGCGGAAT  
TGCAGGAAGGATGCGTACGATGCCGTGCTTCTAGCGCATTCCCAGAACCCAATGGGTACGATGCGGCTT  
40 TCCCTACATCCTTCAGCGTGAATGCGCCGAAAAACCCACACAATCCTGCTTCAGGCCCAGGAACA

SEQ ID NO. 96

MTPTPPSTTSSSAGGISPEGHYRVIRKRNRPVLSGCPCHRLKLCNRAHPCENCVKRGDASSCTYAQANAR  
KKN SPLQTASSSPDDMQNRIDRLESVLVSLMTNGSQSAGPTAAMAVISGNSSSIGSAQHTSEDVELDDDDG  
45 QGPEESDTEQLTKSIGIMKVDNNKSWYISDAHWASVLSIDAEVKNYFNTHKKQYEEHAEKIKATRLPTDVP  
GSTLLFGGKTISREEIMASFPSTADILVARYFNHYDPSTHILHGPTFQAQYNKHWEDEPSKTCIVWIGM  
LFAMMRLAMLSYHREGDEPPEFRGKALDMAGTYRNLMAQCLTLADYTKPYPCLESVLFHLYGDFCQSKDA  
DVSGWVLVGVARLAMRMGYHRDSKMFPNITPFQGEEMRRRVWAFVRQADLLFSAQVGLPSMIRTSDSDEL  
PRNLYDDDFDENCTELPPSRPSTETTPISFLIAKARITYAFGRVIEDTSSLRSAPYDKVMEIDEELRRARD  
50 LVPEHLRVRSVEETQLDPANLIMSFEIMSVYHKAQCVLHRRFLARARENPRFTYSRRCTIDSALELLRYQ  
SMIHTDTRPNRGLRGKLNRTTSLCSDFLAATIVCLDLYHGLQLQAGGRASDDTYTWGRERRDEMVAALQ  
RSKEIWDELQDETIDAWKASGVLGVMLARLNLGNTASTTFEPQDEKQSAAMTLGLLSSGMNYMNPPTPGF  
GEATTKMADTPVPPPGGFGAADMPGAPSPFSAMFGQMPDMQVNLWDWDWDNYIQNSSIDFSNQWWPAMDAQ  
QAPQPQPGNPLSPSQAATQGGIAGRMRTMPSLSAFAPEPNGYDAAFPTSFVSNAPKNPHNPFASGPGT  
55

SEQ ID NO. 97



TCGTCTCCAGAGCAAACGCCCGCCGATCTGGCCGCGCTCGTTTCGATCCGCAGTCCATCGGTTTGGTCAATGT  
CACCCTGACTGGAGCCTGCAAAACACGGTCCCTTTCATGCCCGTCGCTACCTTCCCCTCCTCGTCGA  
CCAGCCCGGGCTTGACCGACTACACCAATTCTTCGCAACCCATCCGGTTCACGAATGACCCCTAACTCCC  
GACTCTTCCGCTCGGTCCCCGGTGATGGGTATTTGATCGATATCTACTATACCTATTTCCATCCCTCGCA  
5 CCAATTCTCCCTCCGCTCCGCTTTCTCTACCGCTCCTATCTCCCGACCTTCTGGAGCAGGTCAATGAAG  
TCATCGGTGCTCATTTCCTCCGCGCGCTTCGAGCGAGACGTATCGACCCACCGTTGTGTCAAATGTGAAG  
GAGCAAGAGGGCTCTATAGAGAAGCTGCAGGCTCTCTTGTGCTCGCGGTGGTCTCCACTCTCGCAATGA  
ACGTCCCGAAGCTGGCGAGTGTCTCGCCGAGCTGTTGACCTAGCGTTTGAGCTGGGACTCCAGACGCAGA  
10 GTTTTCGCCACCGCGATGAGCGACGGTGACCCCATCCGCGCGGAATGCCTGCGGCGCACATGGTGGGAGCTG  
TTCATTATCGAGGGGATGCTGACTGCACTTGGGGTTCAGAGCACTTACCGTACCAACATGGTGGCGCCGGA  
GGTGGGACTACCATGTGAGGAACGGATCTACAGGATGGCCTGGCGCCGCCCCCGCTCCAACGATCGCTC  
AATTCGACAATCGCGTCTTCGCCGACGAGGAGCGGACTTCTCTTCTTACCTACCGTATCGAGGCGGTG  
CGCATTCTCGGGCGCGTGGTCCGCATCCAGGACATGGTTCGAGGGCCAAACAGGACCATGTGGAGGCCATTGA  
CGCCCGAATCAGAGTTGGTTCCACCACCTCCCCGAGTCCAAGGCGGAGCTGCTGCGTCCCGATGGTTCCG  
15 TGGATGAGATGATGTTCCAAAGCCACCATGATCGTGAACGGCGCGTCGATATACCTCCACTTCCCCCGTTCT  
GATTTGCTGTATCGCCCGCATGGCCGCGGAAGTGATCTGCGGTACCCAGGACCTGCAGCATTCCCGC  
ATTTTCACACCACGCCCATGCAATGAAGGCCCTCAAAGCCGCCAGCGAGATCTCCTCGTGGTTCCATCC  
GCATGCCGGTGGTCAAACACACGCCCTTCTTCATCTGCGCCCTGGTTATGAGCTCGATCGTGCAGCTGGCT  
GCATGCTCCGTCAAGGCCGGGCGAGTGCCCGATCCCGAGCCGGGATCGCCTCACCTGACCATTGGCGTCTT  
20 CAAATCCCTGGCCCGCACGTGGGCCATCTCCAGACAATCATGAGGCAGATCAAAGCCGTGTCGCGCGATG  
TTATGGACATGGGACTGCGGCCGGCCATGGACCAGATTGATCTGACGACCCTCCTCGATAGCGGTGCGTTC  
TTGATGCCCGATGGACTGATGCGA

**SEQ ID NO. 102**

MNDPFVPAKNPGPTKAAGPSLLACLLCRHKHLKCDGKTPVCGRCAATGSECQYTPSRRGYKGPSKKRRANP  
SSPEQTPADLAASFD PQSIGLVNVPDWSLQNTVPFMPVATFPSSSSTSPGLTDYTNSSQPIRFTNDPLTP  
DSSASVPGDGYLIDIIYYTFHPSHPILPLRFLYRSYLPFLEQVIKFIGAHFTPAASSETYRPTVVS NVK  
EQEGSIEKLQALLLLAVVLHSRNERPEAGECLAGAVDLAFELGLQTSFATAMSDGDP IRAECLRRTWEL  
FIIIEGMLTALGVQSTYRTNMVPPEVGLPCEERIYQDGLAPPPPTIAQFDNRVFAD EERDFSSFTYRIEAV  
30 RILGRVVG IQDMVEGQ QDHVEAIDARITSWFHLPESKAELLRPDGSVDEMMFQATMIVNGASIYLFPRS  
DLLSSPAMAAEVICGHHGPCSIPAFSHHAHAMKALKAASEISSLASIRMPVVKHTPFFICALVMSSIVQLA  
ACSVKAGQMPDPSRDLTLTIGVFKSLARTWAI SQTIMRQIKAVSRDVMMDGLRPAMDQIDLTTLLDSGRF  
LMPDGLMR

**SEQ ID NO. 103**

ATGGCCAAACCCAACCAGCGCCATGCCTGTGACCGCTGTACGGTCAAAAACCTGCGATGCATCCACTCCGG  
GGGTGGGCCGTGTGTACGCTGCGCCAAAGCCAAAGCCACCTGCAGCTGGAGCCAGTCTTACGTTCCAACC  
GACTCAAGAGACATAACGCGCCGATATCTGATGTTCCCTTTGGCGTGTGCGCAACTAGCAACCCAGTCGACC  
40 GACCCAAACACACCTCAATTTGGTGATACATGAGCCAACCTCCTCCGCCGGCGTGTGACATTGACATCAA  
CTTGCTGCAGACTCAATTCACCGACAGTACTCCCTGGGCTCTGCCGGCCGGCCGCTATCCCTCTCCAGCAT  
CACAGGAAATGGAGACTTACAATGTGGGTCACTGAGGCGGACCTTCCGGCCACCGCGGACTGGATGTGG  
CCCGCCGTGCGCAATGGTCCCGTTCAAACGACTCCCCCGGCAAATTGGCAGCAAGCATTC AATCAGGAATG  
GGCTATGATGGCGTCGAGCACCTGTGCAACGATGGACACGCCGTCTCGGACATCGCCAGTAAGCGACG  
45 CCGTGGACCCGCCGAAGACGGTGTGCCTTCTTGCGACCATCCGCGAGTTGTGAGAGCTTAACGTCGACCTG  
TACGCACACGAAGCGACGGTCCCCAGACCTCCTGCATCTCTGGAGGAACCGATCAGCTGGAAGAACAAGGA  
TTTCGCCATCGATCGGACTTCCACCTGTCCCAGCGGCTCATTGAGATCGTCAACAAACGATATCCGCGCT  
ACCTCGAGACGGCCCGCATGCAGACCCCGGAGGGGACTCCCGAACGGACCTCCGAAAGCAGTCTGTCTGGC  
CCGCCACTTGACCAAGGCTCATGTCTCCTCGTTCTCTCATGTTACTCGACTCATCGAGACCTACGATCG  
50 AATCTTTGCCAATATGCAGGGATGTCTGGATCGTTCCTCGGTACGCGCCGAGAAGACTACGTCAATATGC  
CGTCCGTCCAAGTCGGCTCCTTCTCCTTGCCACACTCGTCTCGTTGCAAATCGTCTCATCTGCAGTTG  
GCGCGTCAACTCCTAACTCGAATGGGCGAGATCATCAAAGCCGTTAGCCGGAGAAAAGAACTAACCCCGC  
TGATGTCACCTTGTCCGAATCCGCAACCGGGGTCTCCTACTGTCTAGCGCTTTGGAGACCGTCTCCGCCG  
AAGAAGACCGTCTGATGAAAAGAATCACGAAACTACGAAGCACCTTGATTGAGCTAAACATTCTG

**SEQ ID NO. 104**



GCGGACATCTCCATCTGGGTCTGACTGGCGTTGTTACTCGCCTAGCAATGCGATCAGGGTATCACCGTGA  
CTCCAAAATGTACCCAAACATCACACCTTTCCAGGGTGAGATGCGACGTCGGGTGTGGACTTTTGTGCGCC  
AAGCCGACATTCTATTCTCATACCAGGTCGGCTTGCCGGGCATGATCCGAGGTGCAGATAGCGATACTGAA  
CTGCCACGGAATTTGTACGATGATGATTTTGTGAAGATTGCAAGGAGCTCCCGCCGCCACGTCAACTGAA  
5 CGAGCCACACCCATCTCGTATTTGATTGCCAAGGCGCGCTTGTCTGATGTATTTCGGTTCGCGTGGTTGAAC  
AAAGCTCTTCTGTGTCTGTCGGTCCCATACGAAAAAGTAATGGAAGTGGACGCAGAACTCCGACAGGCAAGG  
GACTTGATCCCAGAGCACTTACATATTTCGGCCTATGGAGGAGTGCCAGTTGGATCCTATCAATATTATCAT  
GTCGCGGTTTTCCGTAATGGCTGTATACGACAAAGCTCAGTGTGTGCTTCATCGCCCGTATCTGGTTCGCG  
10 CCGGAGAAAATCCTCGTTTTACCTATTCTCGGAGGACATGTATCGACTCAGCAATGGAGTTATTGCGGGTC  
CAGGCGCTTCTGCACGCGGAGACGCGCAACGGACGCTCCGCGAGTCGCCAGAGCCGAGTAACCTCCCTCAC  
TTCAGCGGACTTTTTACTAGCAGGCACCATTTGTTACTCTCGACCTATACCACGGCCTGTCTATTGCAGGTCA  
GCGGCCGCGCCATCAGGAGACACGTATACATGGGGCCGAGAGCGGCGCGATGAAATGACCGCCGCGATCCAA  
CACTCGAAAGAAATTTGGGACGAGTCGCGTGATGAGAGCATGGAAGCATGGAAGCATCCACTGTTCTCGG  
TGTGATGCTCAGCAAGCTACACATGACGGTCCCAGGCCCTGAGAAATAGCGCCGAGCTGCTTCATTTGAGC  
15 CACAAGACGAGAAGCAGAACGCGGCCATGACCTCGGCCCTACTGAGCAGCGGAATGAGCCCGATGAACCCG  
GGCAGCCGCGCTTTGCTGATCCCATGTTCAAGATGGGAGATTGCGCGATGGGAAGTGGAAACAGGTGCTGT  
GGGCGCCTCGGCCGAAATGCCGGGTGCTCTTTGCGCCCTTAGCAGCATGTTGCGGCAGATGCCGGACATGC  
AGGTTAACCTTGATTGGGATGCCTGGGACACATACATCCAGAACCCCAACCTCGACACAACAAATCAGTTC  
TGGCCTATGATGGATGCACAGCGCCAGGCAACCCACAGTCTGGAGGCATGTACAGCCTTCAGTGTCTAG  
20 TCCTCTGGCCTCAGGGCGGGTGCCATCAATTAGTGGTGTTCACGGATACCGACAATGTACTCAGCATCCT  
CCAACAGTCCCGATAGTGCAGGTGTGCCAGTGACAGGATACGGCATGACGCCAATGCCTCAACAAAACGAT  
GGTCGGGGCCAAGGCTCCCAA

**SEQ ID NO. 108**

MIMPYPTKMTPTPPSTNSSSAGHSPDYRVVRKRN RVPLSCGPCHHRKCLKNRTHPCENCVKRGDAASCNYA  
QPNRKRKNPQQSSTTPDDMQNRIDRLEGLVLSLMTNGSQSAGPNAAMAAISGESSAGSTRFSHDLDAEEEG  
MEGAESD TDQVTKSFGIMKMDNNKSYIISDAHWSVLS DIAEVKSFFSTHKKQMDAQIEKVKASQPPSEA  
SGSTLLFGINKPMSRGEIMSGLP SKYTTDILIARYFNCYDPATHVLHGPTFQAQYNKHWDDPSATELVWIA  
30 MLFGMMRLAMLSYHREGDEPPEFRGKSLDMAGGFNRNSVAQCLTLADYTKPHPFLEALVFHLHGDFSLTRE  
ADISIWMVTGVVTRLAMRSGYHRDSKMYPNITPFQGMERRRVWTFVRQADILFSYQVGLPGMIRGADSDTE  
LPRNLYDDDFDEDCKELPPRQLNEPTPISYLIKARLSYVFGRVVEQSSSVSSVPYEKVMELDAELRQAR  
DLIPEHLHIRPMEECQLDPINIIMSRFSVMAVYDKAQCVLHRPYLVLRARENPRFTYSRRTCIDSAMELLRV  
35 QALLHAETRNGRLRSRQSVTSLTSADFLLAGTIVTLDLYHGLSLQVSGRPSGDTYTWGRERRDEMATAIQ  
HSKEIWDES RDESMEAWKASTVLGVMLSKLHMTVPGLENSAGAASFEPQDEKQNAAMTLGLLSSGMSPMNP  
GQPPFADPMFKMGDSPMGTGTGAVGASAE MPGALSEFSSMFGQMPDMQVNLWDWDADTYIQNPTLDTTNQF  
WPMMDAQ RQATPQSGGMSQPSVSSPLASGRVPSISGVPRIPTMYSASSNSPDSAGVPVTGYGMTMPMQQND  
GRGQGSQ

**SEQ ID NO. 109**

ATGAATCCCGCAAACCTTCAACGTGGGCGGCTCCATGCCCCGCGCGCCACCCCCAGATGCCGAGACTCGA  
CAATAACCAGGTCATGATGAACTATGTCGCCCAGGCTTTACATGCACAAGGCACCTATACCGGTTGGCGCG  
45 CCGAAGTGCCCATGAAAGAGCGCGTGGTTCGAGTGATCAAATGTTACCTCCCTTCGCCTTATCCAACCC  
CAAGCAGATCTGCAACACCTGGCCCCAAGCTGCCCTCAGCTTTGAGCAGAAGGCCTTCAAAGACGCTCAGCA  
GAAAGTCGATTACGACAAAGAAATGTAACGACAAATTATTGCATATTTCGAGATACTCGAGCGAGACAGGCCG  
CCGTCATGCAGAAATGGCATGATTCCCCCGGGCGCTCCCAAAGCCGGCGGCATGCGTGGCGTCGGACAACCC  
TCCTTCCCGCAACAGATGAATCGAGCCATGCAATCCAATCCCATGGCCGGTCAACAAGCCATGGCCATGGG  
GATGACCGATCCGAATCAACAGGCCGCCATGCCGCAGCGATCGCAACAGCAGCAAGCCATGATGCAGCAGC  
50 AGCAGCAACAACAGCAACAACAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC  
AATACCCTCGCCCTGGTCGACGAGCTGAATAACCTGACTCCGCAAGAGTACGAGAACGTCAATCGCGTCGC  
TCACCAGATCATGACCAAGACCTCGCCGGTGGATGCGGAGAAAATCAAACGCAACCTGCAGAACTGAATC  
CTGTACAACGCCGGTACCTGACTGAAAGAAACATCGACCCGGTCGCGTATTTCTTTTCGCTCGCAGGCCCTC  
GCCACCTCAAGCGGCAGATGAAGGCCCGTGTGGACATGTCTACCCCCAGAATACCGGCGTCGACCCGAA  
55 CAATGTGATGATGGGCGCCGATCCGACGATGAACCCCCAGATGTTCCCGAACATGATGAACCTACAGCGCA  
ATTTCGGCCTTCGCCATGGGCAACCAGCCAAACATGGACCCCTCTTCCTTCATTGGCAACGTGGAGAACATC  
CAAGGACAGCAGGCGGATGGCCTCCGTTTCGACGGAAGCTGGTCAGCTGGTCGTCGCCCGGAGCTCCTCCCA



RRASSQTAVSATS AVPPAPFGAPSPQGVPHAYGPGSMPPEQLKLPPPKRKRQSHPGATPTVGT PATKPPTT  
RPADV KMPAAASSHVISYVTLTFT PSSHRSNRKGRS

**SEQ ID NO. 111**

ATGCAAAGCCCCAGCAGCCACCCGACTTTCTACTGTACCCGACTCAGTCCACGCGTGGGAGCAAAATGAT  
CGCCTTGGATTTCGTCCCGCCAGCAGCAGACCCCATTTCTCCAGAATTTACCATGGATCCTGCATTACGG  
ACCCCTTTCGATTTCAGGTGGACACCTTCGCTAGCTTCGGACAGCCCCGAGTTCCTCTCGAGGCCCCCAG  
ACTTCATATTATGATACCCCTCCGCTCTACACGGATTCTTACTCCGACTCCAATAAGACCGCCCCCTGGGTT  
TCCTTCCATGCCGGGTACGCCCCGACGCTTCCCTCCACCCAGCGCTGGACTCCACGTTCCGGGGCTGA  
CCGCCCCGTCGGGTCCGTCTGTGCGCCAGCGCCTCCTCCTCGGCCATTGGGTGCGCGTACTCCGGCACGGCC  
CATGCCAACAGGAGAACTGGGTGATACGAACCACGGCCTGGGCCTTCCCGCCGCGGTGATGGGGGATCT  
GTTTCCGAACGACTACACGGGGACGACCTTGACCCCGATTACTTTGCCAATAAAGGCGCGGACAGCTTTG  
TTGACCCTTCTTTGATCCCGCTTACGACGAGTGAATCTGTGACCCCGGCCATCTCTACCCGGAACAG  
ACTGATTATAGCCTGGTCCCCGGCGGATTCTTCCCTCAGTCCCCTGACCCTTCCCAATTCCAATTTGCGGA  
CCCCATATGGTCCATTACACAGCAGCCATGCCCCATGCCCCCTCATCCCCATCTCTGATGCCCTCCCATG  
TCCCGCCCCGTCGTCTCTCCCTCTACGACCGTCGGTCTCCTCGGTCTCTTCCGTGCAGTCCCGTCGTGCGAG  
CTGAGCCCCGGCGGCCAGCAACGCCGAGATCGAGGAGGACGCCAAGGAAAAGGGCCGATGCCCTCATCCGGA  
TTGCGGTGAGTCTTCCGGGACCTGAAAGCGCACATGCTGACGCATCAGTCGGAGCGTCCGGAGAAATGCC  
CCATTGTCACTTGCGAGTACCACACCAAGGGGTTTGCCCGCAAGTACGACAAGAACCGCCACACCCTGACC  
CACTACAAGGGAACGATGGTTTGCGGCTTCTGCCCCGGGATCCGGGTGCGCGGCCGAGAAGAGCTTCAACCG  
GGCGGATGTGTTCAAACGTCATCTGACCTCTGTGCACGGTGTGGAACAGACCCCTCCCAACTGCCGGAAGA  
GAAGCCCCGCGGCCGCCCTCGAGTCATGTAATTAGTTATGTACGCTTACATTACGCCCCCTCTCCACATC  
CGCTCTAACCGAAAAGGAAGGAGT

**SEQ ID NO. 112**

MQSPQQPPDFLLYPTQSTRGSKMIALDSSRQQQTFFQNFMTMDPAFTDPFAFQVDTFASFGQPASSSRGPQ  
TSYYDTPPLYTDSYSDSNKTAPGFSPMGPPTLPSTQPLDSHVPGLTAPSGPSVASASSSAIGSPYSGTA  
HANQENWVDTNHGLGLPAAVMGDLFPNDYTGTTLDPDYFANKGADSFVDPSLIPLQQQSNLSTPAISYPEQ  
TDYSLVPGGFFPQSPDPSQFQFADPYGPFTQQPCMPASSPSLMPSHVPPRRLSLYDRRSSVSSVQSRRSQ  
LSPAASNAEIEEDAKEKGRCPHPDGCRVFRDLKAHMLTHQSERPEKCPIVTCEYHTKGFARKYDKNRHTLT  
HYKGTMVCFGFCPGSGSPAEXSFNRADVFKRHLTSVHGVEQTPPNCRKRS PAAASSHVISYVTLTFT PSSH  
RSNRKGRS

**SEQ ID NO. 113**

ATGCTCGAGTTAGTCGATGCTATTCCGCTTCAGACCCAGCCAGTTCCTCCTGCTCCTGAAGTTCAGGTTTCAG  
CCCCCTCCAATCGTGGAGACGCGCCATTTCAACCCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC  
GCGAGTCATGTCGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
GCGCCGCCGCCGCCGCCGCCGCTTTCTCATATACCAGAAAGAGGGATCACTGATAACTATGGTGTTGAGCCT  
TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCTTAGAAAGCGTCGGTCTC  
TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
TCGAAACCCCCAGCCCGTGAGAGTTCAGGCTGGGCATCGATAACAAGTTTGTACAAAAAGCAGGCTCCACA  
ATGACGGAGAACCACACCCCTTCTACTACGCAGCCGACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATC  
CAAGCAAACCCGCTCCTTCTGCCTCAGTCACGGCGACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCC  
CCCTCTATGAACGGCGCGGCTGAGCAGTTGCCTTGCCAGTGGGTTGGTTGCACGGAGAAGTCCCCCACTGCC  
GAGTCTCTATATGAGCATGTTTGCGAGCGTCATGTTGGACGTAAAAGCACCAACAACCTCAACCTGACCTGC  
CAGTGGGGCACTTGCAACACCACAACAGTCAAGCGTGATCATATACCTCCCACATCCGCGTTCATGTGCCA  
CTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCTTTCAAGCGCCCCCAGGATTTGAAGAAGCATGTCAAG  
ACTCATGCGGACGACTCCGAGATCCGCTCCCCCGAACCAGGCATGAAGCACCCCTGATATGATGTTCCCCCAA  
AACCTAAGGGTTACGCTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGG



**SEQ ID NO. 114**

ATGCTCGAGTTAGTCGATGCTATTCCGCTTCAGACCCAGCCAGTTCCCTCCTGCTCCTGAAGTTCAGGTTTCAG  
 CCCCCTCCAATCGTGGAGACGGCCCATTTCAACCCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC  
 GCGAGTCATGTCGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
 5 GCGCCGCGCGCGCGCGCGCGCTTTCTCATATACCAGAAAGAGGGATCACTGATAACTATGGTGTGAGCCT  
 TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCTAGAAAGCGTCGGTCTC  
 TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
 TCGAAACCCCCAGCCCGTGAGAGTTCCAGGCTGGGCATGACGGAGAACCACACCCCTTCTACTACGCAGCCG  
 10 ACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATCCAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCG  
 ACTGCTGCCGCGCTACTGCGGCGGTGAACAACGCCCCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGC  
 CAGTGGGTGTTGTCACGGAGAAGTCCCCACTGCCGAGTCTCTATATGAGCATGTTTGGCAGCGTCATGTT  
 GGACGTAAAAGCACCAACAACCTCAACCTGACCTGCCAGTGGGGCACTTGCAACACCACAACAGTCAAGCGT  
 GATCATATCACCTCCCACATCCGCGTTCATGTGCCACTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCT  
 15 TTCAAGCGCCCCAGGATTTGAAGAAGCATGTCAAGACTCATGCGGACGACTCCGAGATCCGCTCCCCGAA  
 CCGGGCATGAAGCACCTGATATGATTTCCCCCAAACCTAAGGGTTACGCTGCTGCCACACATTACTTC  
 GAAAGCCCTATCAACGGCATCAATGGG

**SEQ ID NO. 115**

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
 APPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVGLSSDWDGIFSSVEEPLLPTSLPMD  
 SKPPARESSRLG**IDTSLYKKAGSTM**TENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNA  
 PSMNGAGEQLPCQWVGCTEKSPTAESLYEHVGERHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP  
 20 LKPHKCDFCGKAFKRPQDLKKHVKTHADDSEIRSPEPGMKHPDMMFPQNPKGAAATHYFESPINGING

**SEQ ID NO. 116**

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
 APPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVGLSSDWDGIFSSVEEPLLPTSLPMD  
 SKPPARESSRLGMTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNAPSMNGAGEQLPC  
 30 QWVGCTEKSPTAESLYEHVGERHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP LKPHKCDFCGKA  
 FKRQDLKKHVKTHADDSEIRSPEPGMKHPDMMFPQNPKGAAATHYFESPINGING

**SEQ ID NO. 117**

ATGACCGCCCCCATACCGACGTCAGCCTGGGGGACGAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCG  
 CATGCCGACGCGCTAGACGATTTGATCTGGACATGTTGGGGGACGGGATTCCCCGGGTCCGGGATTTACC  
 CCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGGAGCAGATGTTTACCGATGCC  
 CTGGGCATTGACGACTTTGGGGGAAT**CGATACAAGTTGTACAAAAAGCAGGCTCCACA**ATGGATCCTAGA  
 35 AACCATCCCTCTCGGCCTCCGCTACCAGTCTGCCTCAAGGATCGGCGCCTCTTCTTCTGCTCCCATCTCG  
 AGCATGCCAATGCCTCAGTACACGATGCAGCCTCAGTACCCAGTCTCTCAGCCGCACACCCCTGCCTCCTCTG  
 CAACCCCATCATAGCCAGTCGCCCCGCTCCTCACTCGTACATGGGGCAGCCGCCGTACCGGCCTGATCTGAAC  
 AGGTACCCCGCATCAAGTCACGATGTTTACGCGTCTTCTGCTGCGCCGATAATGCCCCACACTACCGTGGGC  
 AGCTTGCCCTCCGACATCTTCCCTTCTCATCCCAATCCGCAGGCGCAGGCACAGGCGCAGCAATCGCCGCAC  
 40 TATCCTCCTCCTCATAGCGTGCTCCCGCCCCGCTTCCAGCGCTCAGTCGTACCCGCAGCCAATTGCGCCGGCG  
 CCTCCCCGGGACCGTCGTGCTGACTTCAACAATGGACTTCCTTCAGGAGCATTAGTTATTTCGGACGGAAAG  
 CCTCAAGGTTGGGACCCCGTTGCTGCGAATGGTGTGCGCCGATCCCGGGAAGGACTCCCCCGAACCAG  
 GTTGTGTTGTTCTCAGGGGCGACGCGGTATCCTTCCGAGTGTTCCGGGACGCGCAACTCCGGTCACAAATGGT  
 GTTAACGGCACCGGCAAGAACACTACTATCCCGGCCAAGGATGCCGATGGAAAGTTCCCTTGCCCGAACTGT  
 50 AACAAGACTTATCTTCATGCCAAGCATCTCAAGCGCCATCTGCTACGCCACACTGGTGACCGCCCGTACATG  
 TGTGTTCTTTGCAAAGACACCTTCTCTCGCAGTGATATCCTGAAACGTCAATTTCCAAAAATGCTCAATCAGG  
 CGTGGAATCCCCACCGGAGCAACGCACTTGTCGACCCCAATGCGCATGTGAAGAGGTCCCAACAGCAGGCT  
 GCGGCGAATCCTGTAAAACCTGTCCAGGATGAAGTCAGTAGTACCGTCCCGCCTCCCAATGGCATCCCGGGC  
 ACGACTTACGGCGAGGGAGCCGTCAACGGCAATGGACTAGCTCCGGCCCCGGCCAGGGTACGCGGATCACCAG  
 ACTATGGGCTTCCCAATGTATCCGTCAACGGGATGGGCCGTGGTCAGCCTGAAGACGCGTTTCCCGCGCGC  
 55 CGGCCGCATCAAGGAGCCCCCTTGCCACAAGCTCCCAAGCAGAGCCCGTATCTCGTGACCGCGGTGCTGAC  
 CCTTCTGGCCACCAGTTGAATATTGACCGAAACATCGAGCAGGTAAAACAACCGGTTGTTCAAGACCCCAAG  
 CGCCCTGTGATGCCAGGACATCCCGGCCACCCCGGTGAGCTTGACTGGACGTCTATGTTCCAACCTCAAGCT

CCCAGGGGCTACATGTTCTCCAGTCTATGCCTGGTGGTCAAGAGCCCATCCACGCTCATGTGAGACCGAG  
CGAAAGTATTACCCCACTACCGCTGGTCAAGAGAGTGAATGAACGGTCTCTATCTGGCTTCGACTATG  
AGTGGCGACGGCACCGTTAGCCCGCCAGACAA

**SEQ ID NO. 118**

ATGACCGCCCCCATTACCGACGTCAGCCTGGGGGACGAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCG  
CATGCCGACGCGCTAGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGTCCGGGATTTACC  
CCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGAGCAGATGTTTACCGATGCC  
CTGGGCATTGACGACTTTGGGGGAATCATGGATCCTAGAAACCATCCCTCTCGGCCTCCGTCTACCACTCTG  
CCTCAAGGATCGGCGCCTCTTCCTTCTGCTCCCATCTCGAGCATGCCAATGCCTCAGTACACGATGCAGCCT  
CAGTACCCAGTCTCTCAGCCGCACACCCTGCCTCCTCTGCAACCCCATCATAGCCAGTGCAGCCGCTCCTCAC  
TCGTACATGGGGCAGCCGCGCTACCGGCCTGATCTGAACAGGTACCCCGCATCAAGTCACGATGTTTACGCG  
TCTTCTGCTGCGCCGATAATGCCCCACACTACCGTGGGCAGCTTGCTCCGACATCTTTCTCTTCTCATCCC  
AATCCGCAGGCGCAGGCACAGGCGCAGCAATCGCCGCACTATCCTCCTCCTCATAGCGTGCTCCCGCCCGCT  
TCCAGCGCTCAGTCTGATCCCGCAGCCAATTGCGCCGCGCCTCCCCGGGACCGTCTGCTGACTTCAACAAT  
GGACTTCCTTCAGGAGCATTTCAGTTATTCGGACGGAAAGCCTCAAGGTTGGGACCCCGTTGCTGCGAATGGT  
GCTGCGCCGATATCCCGGGAAGGACTCCCCCGAAGCCAGTTGTTGTTCTCAGGGCGAGCGGATATCCTT  
CCGAGTGTTCCGGGACGCGCAACTCCGGTCACAAATGGTGTTAACGGCACCGGCAAGAACAATACTATCCCG  
GCCAAGGATGCCGATGGAAAGTTCCCTTGCCCGAAGTGTAAACAGACTTATCTTCATGCCAAGCATCTCAAG  
CGCCATCTGCTACGCCACACTGGTGACCGCCCGTACATGTGTGTTCTTTGCAAAGACACCTTCTCTCGCAGT  
GATATCCTGAAACGTCATTTCCAAAAATGCTCAATCAGGCGTGTAACCCCAACCGGAGCAACGCACTTGTGCG  
CACCCCAATGCGCATGTGAAGAGGTCCCAACAGCAGGCTGCGGCGAATCCTGTAAACCTGTCCAGGATGAA  
GTCAGTAGTACCGTCCCGCCTCCCAATGGCATCCCGGACGACTTACGGCGAGGGAGCCGTCAACGGCAAT  
GGACTAGCTCCGGCCCGGCCAGGTACGCGGATCACCAGACTATGGGCTTCCCAATGTCATCCGTCAACGGG  
ATGGGCCGTGGTTCAGCCTGAAGACGCGTTTCCCGGCGCGCGCGCATCAAGGAGCCCTTGGCCACAAGCT  
CCCAAGCAGAGCCCGTATCTCGTGCAGCCGGTGCTGACCTTCTGGCCACCAGTTGAATATTGACCGAAAC  
ATCGAGCAGGTAAAACAACCGGTTGTTCAAGACCCCAAGCGCCTGTGATGCCAGGACATCCCGGCCACCC  
GGTGAGCTTGACTGGACGTCTATGTTCCAACCTCAAGCTCCCGAGGGCTACATGTTCTCCAGTCTATGCCT  
GGTGGTCAAGAGCCCATCCACGCTCATGTCGAGACCGAGCGAAAGTATTACCCCACTACCGCTGGTCAA  
GAGAGTGAATGAACGGTCTCTATCTGGCTTCGACTATGAGTGGCGACGGCACCGTTAGCCCGCCAGACAA

**SEQ ID NO. 119**

MTAPITDVSLGDELHLDGEDVAMAHADALDDFDLMDLGDGDSPGPGFTPHDSAPYGALDMADFEFEQMFTDA  
LGIDDFGGIDTSLYKKAGSTM DPRNHPSRPPSTSLPQGSAPLPSAPISSMPMPQYTMQPQYPVSPHPLPPL  
QPHHSQSPAPHSYMQPPYRPDLNRYPASSHDVYASSAAPIMPHTTVGSLPPTSFLSHPNPQAQAQAQSPH  
YPPPHSVLPASSAQSYQPIAPAPPRDRRADFNGLPSGAFSYS DGKPQGWDPVAANGAAPYPGKDSPTQ  
VVGSGQRRGILPSVPGRATPVTNGVNGTGKNTTIPAKDADGKFPCPNCNKTYLHAKHLKRHLRHTGDRPYM  
CVLCKDTFSRSDILKRHFQKCSIRRGNTGATHLSHPNAHVKRSQQQAAANPVKPVQDEVSSSTVPPNGIPG  
TTYGEGAVNGLAPARPGYADHQTMGFFMSSVNGMGRGQPEDAFPGGRPHQGAPWQAPKQSPYLVQPGAD  
PSGHQLNIDRNIQVKQPVVQDPKRPVMPGHPGHPGELDWTSMFQQAPEGYMFSQSMPPGGQEPIHAHVETE  
RKYYPPTTAGQESGMNGLYLASTMSGDGTVPARQ

**SEQ ID NO. 120**

MTAPITDVSLGDELHLDGEDVAMAHADALDDFDLMDLGDGDSPGPGFTPHDSAPYGALDMADFEFEQMFTDA  
LGIDDFGGIMDPRNHPSRPPSTSLPQGSAPLPSAPISSMPMPQYTMQPQYPVSPHPLPPLQPHHSQSPAPH  
SYMQPPYRPDLNRYPASSHDVYASSAAPIMPHTTVGSLPPTSFLSHPNPQAQAQAQSPHYPPPHSVLPAP  
SSAQSYQPIAPAPPRDRRADFNGLPSGAFSYS DGKPQGWDPVAANGAAPYPGKDSPTQVVGSGQRRGIL  
PSVPGRATPVTNGVNGTGKNTTIPAKDADGKFPCPNCNKTYLHAKHLKRHLRHTGDRPYM CVLCKDTFSRS  
DILKRHFQKCSIRRGNTGATHLSHPNAHVKRSQQQAAANPVKPVQDEVSSSTVPPNGIPGTTYGEGAVNGN  
GLAPARPGYADHQTMGFFMSSVNGMGRGQPEDAFPGGRPHQGAPWQAPKQSPYLVQPGADPSGHQLNIDRN  
IEQVKQPVVQDPKRPVMPGHPGHPGELDWTSMFQQAPEGYMFSQSMPPGGQEPIHAHVETERKYYPPTTAGQ  
ESGMNGLYLASTMSGDGTVPARQ

**SEQ ID NO. 121**

ATGACCGCCCCCATTACCGACGTGAGCCTGGGGGACGAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCG  
CATGCCGACGCGCTAGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGTCCGGGATTTACC  
CCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGAGCAGATGTTTACCGATGCC  
5 CTGGGCATTGACGACTTTGGGGGAATC**GATACAAGTTTGTACAAAAAAGCAGGCTCCACA**ATGGTTCTTCTC  
AAAAAGCATTTGAAAGATGTCAACCGTGAGGATCAGAGGCAAATGCCGAGGCAACGGCTGCCATCTATTCAA  
GAAATATTTGGGGAGACTTTTCTGGCGATTCCCTCAAATCCATCATATGCACTGCCTTCTCACACCAGACAT  
GCCGCTCCACCGGCTTTGCCGGCTGTGTATGAAATTGCCATTCAATCGAAGGGGCTCCGTCAAATGAGCAA  
10 GGTTTATTACCCAAAATTTCAACAGTGGAGAGATCCTTGGGCATTATCTCTCCCGTCAATGAGCTCCAGCAT  
CCGGAGGTAATACGCCCCGAAAATCCATCCTTCTCTCCGAACGGTTGTCTCTTAACGAAAGCCGTCGCTTT  
TCAAAGCACCCGGACCTATCTATACCTCAACCGGGTTTATTGTGTCATGCGATCCCATGGATTTAGCACAGCCG  
TCCTTTGTGCGAACCTCCAAATGTGTTTCATGGATTTCCCATCAGGAAAAATACCAAATCGATACCGCCTCAG  
CCAAAGCAGTTATGTCTGCCGGAACGAACACCGAGTTCTCTTGATTTCACTCTGTTTTTAAGGTGATC  
15 GAGACAGTCAGCGCACAGACCTTGGCTTTCGTGCGGTATCACTCCGCAATGAGTCAGTCAGACAACCATCAA  
AGATCCCTCCCTGGACTATCTATCACTGAGATAAATGGCCTCCTCAGTCAGGAGCAGCAAAAGCAGGATGTC  
TTGATTTATATTAGGGATGAAGTTGTGCGCTTCGACCAATACCAAGCCTTAGCGCAGCAGAACTACTCGGGCA  
GCCGCATGTATGGCGGGTGGGGCTGACCGAGGCTTTTGTTTCATCAGTCACTAAACAGAGCAAGACCCATAAA  
GTCTCTAAACAAAAAGAGAATGGCACGGGGATAGTGCTCTTCGTTGTCATAGCTGCAACCGTTCTGAAACA  
20 CCAGAATGGCGTCGTGGTCCGGACGGCCCCGAACCTCTTGTAAACGCCTGTGGTTTACATTATGCAAAATTG  
TCTCGACGAACGGGCAAATTTGTGGCGTTGGACGATATTGGCATCAGGGGCAAAACA

**SEQ ID NO. 122**

ATGACCGCCCCCATTACCGACGTGAGCCTGGGGGACGAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCG  
CATGCCGACGCGCTAGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGTCCGGGATTTACC  
25 CCCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGAGCAGATGTTTACCGATGCC  
CTGGGCATTGACGACTTTGGGGGAATCATGGTTCTTCTCAAAAAGCATTTGAAAGATGTCAACCGTGAGGAT  
CAGAGGCAAATGCCGAGGCAACGGCTGCCATCTATTCAAGAAATATTTGGGGAGACTTTTCTGGCGATTCCCT  
TCAAATCCATCATATGCACTGCCTTCTCACACCAGACATGCCGCTCCACCGGCTTTGCCGGCTGTGTATGAA  
ATTGCCCATTCGAATCGAAGGGGCTCCGTCAAATGAGCAAGGTTTATTACCCAAAATTTCAACAGTGGAGAGA  
30 TCTTTGGGCATTATCTCTCCCGTCAATGAGCTCCAGCATCCGGAGGTAATACGCCCCGAAAATCCATCCTTC  
TCTCCGAACGGTTGTTCTCTTAACGAAAGCCGTCGCTTTTCAAAGCACCCGGACCTATCTATACCTCAACCG  
GGTTTATTGTGTCATGCGATCCCATGGATTTAGCACAGCCGTCCTTTGTGCGAACCTCCAAATGTGTTTCATGGA  
TTTCCCATCAGGAAAATACCAAATCGATACCGCCTCAGCCAAAGCAGTTATGTCTGCCGGAACGAACA  
35 CCGAGTTCTCTTGATTTTCAGTCTGTTTTTAAGGTGATCAGACAGTCAGCGCACAGACCTTGGCTTTCGTG  
CGGTATCACTCCGCAATGAGTCAGTCAGACAACCATCAAAGATCCCTCCCTGGACTATCTATCACTGAGATA  
AATGGCCTCCTCAGTCAGGAGCAGCAAAAGCAGGATGTCTTGATTTATATTAGGGATGAAGTTGTGCGCTTC  
GACCAATACCAAGCCTTAGCGCAGCAGAACTACTCGGGCAGCCGCATGTATGGCGGGTGGGGCTGACCGAGGT  
CTTTGTTTCATCAGTCACTAAACAGAGCAAGACCCATAAAGTCTCTAAACAAAAAGAGAATGGCACGGGGAT  
40 AGTGCTCTTCGTTGTCATAGCTGCAACCGTTCTGAAACACCAGAATGGCGTCGTGGTCCGGACGGCCCCGA  
ACTCTTTGTAACGCCTGTGGTTTACATTATGCAAAATTGTCTCGACGAACGGGCAAATTTGTGGCGTTGGAC  
GATATTGGCATCAGGGGCAAAACA

**SEQ ID NO. 123**

MTAPITDVSLGDELHLDGEDVAMAHADALDDFDLMDLGDGDSPGPGFTPHDSAPYGALDMADFEFEQMFTDA  
LGIDDFGGIDT**SLYKKAGSTM**VLLKKHLKDVNREDQRQMPRQRLPSIQEIFGETFLAIPSNPSYALPSHTRH  
AAPPALPAVYEIAHSIEGAPSNEQGLLPKISTVERSLGIISPVNELQHPEVIRPENPSFSPNGCSLNESRRF  
SKHPDLSIPQPGLLSCDPMDLAQPSFVEPPNVFHGFPIRKIPNSIPPQPKQLCLPEKRTPSSLDFSLFFKVI  
ETVSAQTLAFVRYHSAMSQSDNHQRLPLGLSITEINGLLSQEQKQDVLIYIRDELVRFDQYQALAQONTRA  
50 AACMAGGADRGLCSSVTQSKTHKVSQKREWHGDSALRCHSCNRSETPEWRRGPDGPRTLNCACGLHYAKL  
SRRTGKFVALDDIGIRGKT

**SEQ ID NO. 124**

MTAPITDVSLGDELHLDGEDVAMAHADALDDFDLMDLGDGDSPGPGFTPHDSAPYGALDMADFEFEQMFTDA  
LGIDDFGGIMVLLKKHLKDVNREDQRQMPRQRLPSIQEIFGETFLAIPSNPSYALPSHTRHAAPPALPAVYE  
55 IAHSIEGAPSNEQGLLPKISTVERSLGIISPVNELQHPEVIRPENPSFSPNGCSLNESRRFSKHPDLSIPQ  
GLLSCDPMDLAQPSFVEPPNVFHGFPIRKIPNSIPPQPKQLCLPEKRTPSSLDFSLFFKVIETVSAQTLAFV

RYHSAMSQSDNHQSRSLPGLSITEINGLLSQEQQKQDVLIIYIRDELVRFDQYQALAQQNTRAAACMAGGADRG  
LCSSVTKQSKTHKVSQKREWHGDSALRCHSCNRSETPEWRRGPDGPRTLNCACGLHYAKLSRRTGKFVALD  
DIGIRGKT

5 **SEQ ID NO. 125**

ATGCTCGAGTTAGTCGATGCTATTCGGCTTCAGACCCAGCCAGTTCTCCTGCTCCTGAAGTTCAGGTTTCAG  
CCCCCTCCAATCGTGGAGACGGCCCATTTCAACCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC  
GCGAGTCATGTGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
GCGCCGCCGCCGCCGCCGCCGCTTTCTCATATACCAGAAAGAGGGATCACTGATAACTATGGTGTTGAGCCT  
10 TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCCTAGAAAGCGTCTGTCTC  
TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
TCGAAACCCCCAGCCCGTGAGAGTTCAGGCTGGGC**CATCGATACAAGTTTGTACAAAAAAGCAGGCTCCACA**  
ATGACGGAGAACCACACCCCTTCTACTACGCAGCCGACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATC  
CAAGCAACCCCGCTCCTTCTGCCTCAGTCACGGCGACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCC  
15 CCGTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGCCAGTGGGTGGTGGTGCACGGAGAAGTCCCCACTGCC  
GAGTCTCTATATGAGCATGTTTGGCAGCGTCATGTTGGACGTAAAAGCACCAACAACCTCAACCTGACCTGC  
CAGTGGGGCACTTGCAACACCACAACAGTCAAGCGTGATCATATCACCTCCCACATCCGCGTTCATGTGCCA  
CTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCTTCAAGCGCCCCCAGGATTTGAAGAAGCATGTCAAG  
ACTCATGCGGACGACTCCGAGATCCGCTCCCCCGAACCAGGCGCATGAAGCACCTGATATGATGTTCCCCCAA  
20 AACCTAAGGGTTACGCTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGG

**SEQ ID NO. 126**

ATGCTCGAGTTAGTCGATGCTATTCGGCTTCAGACCCAGCCAGTTCTCCTGCTCCTGAAGTTCAGGTTTCAG  
CCCCCTCCAATCGTGGAGACGGCCCATTTCAACCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC  
25 GCGAGTCATGTGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
GCGCCGCCGCCGCCGCCGCCGCTTTCTCATATACCAGAAAGAGGGATCACTGATAACTATGGTGTTGAGCCT  
TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCCTAGAAAGCGTCTGTCTC  
TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
TCGAAACCCCCAGCCCGTGAGAGTTCAGGCTGGGCATGACGGAGAACCACACCCCTTCTACTACGCAGCCG  
30 ACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATCCAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCG  
ACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCCCCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGC  
CAGTGGGTGGTTGCACGGAGAAGTCCCCACTGCCGAGTCTCTATATGAGCATGTTTGGCAGCGTCATGTT  
GGACGTAAAAGCACCAACAACCTCAACCTGACCTGCCAGTGGGGCACTTGCAACACCACAACAGTCAAGCGT  
GATCATATCACCTCCCACATCCGCGTTCATGTGCCACTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCT  
35 TCAAGCGCCCCCAGGATTTGAAGAAGCATGTCAAGACTCATGCGGACGACTCCGAGATCCGCTCCCCCGAA  
CCGGGCATGAAGCACCTGATATGATGTTCCCCCAAACCTAAGGGTTACGCTGCTGCCACACATTACTTC  
GAAAGCCCTATCAACGGCATCAATGGG

40 **SEQ ID NO. 127**

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
APPPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVCLSSDWDSGIFSSVEEPLLPTSLPMD  
SKPPARESSRLG**IDTSLYKKAGST**MTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNA  
PSMNGAGEQLPCQWVGCTEKSPTAESLYEHVCERHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP  
45 LKPHKCDFCGKAFKRPQDLKKHVKTHADDSEIRSEPGMKHPDMMFPQNPKGyAAATHYFESPINGING

**SEQ ID NO. 128**

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
APPPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVCLSSDWDSGIFSSVEEPLLPTSLPMD  
50 SKPPARESSRLG**MTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNA**PSMNGAGEQLPC  
QWVGCTEKSPTAESLYEHVCERHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP  
FKRPQDLKKHVKTHADDSEIRSEPGMKHPDMMFPQNPKGyAAATHYFESPINGING

55 **SEQ ID NO. 129**

ATGCTCGAGTTAGTCGATGCTATTCGGCTTCAGACCCAGCCAGTTCTCCTGCTCCTGAAGTTCAGGTTTCAG  
CCCCCTCCAATCGTGGAGACGGCCCATTTCAACCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC

GCGAGTCATGTCGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
GCGCCGCCGCCGCCGCCGCCGCTTTCTCATATACCAGAAAAGAGGGATCACTGATAACTATGGTGTGAGCCT  
TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCCTAGAAAGCGTCGATCTC  
TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
TCGAAACCCCCAGCCCGTGAGAGTTCCAGGCTGGGCATCGATACAAGTTTGTACAAAAAAGCAGGCTCCACA  
ATGACGGAGAACCACACCCCTTCTACTACGCAGCCGACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATC  
CAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCGACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCC  
CCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGCCAGTGGGTGGTTGCACGGAGAAGTCCCCACTGCC  
GAGTCTCTATATGAGCATGTTTGCGAGCGTCATGTTGGACGTAAAAGCACCAACAACCTCAACCTGACCTGC  
CAGTGGGGCACTTGCAACACCACAACAGTCAAGCGTGATCATATCACCTCCACATCCGCGTTCATGTGCCA  
CTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCTTTCAAGCGCCCCAGGATTTGAAGAAGCATGTCAAG  
ACTCATGCGGACGACTCCGAGATCCGCTCCCCGAACCGGGCATGAAGCACCTGATATGATGTTCCCCCAA  
AACCTAAGGGTTACGCTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGG

#### SEQ ID NO. 130

ATGCTCGAGTTAGTCGATGCTATTCCGCTTCAGACCCAGCCAGTTCCCTCCTGCTCCTGAAGTTCAGGTTCAG  
CCCCCTCCAATCGTGGAGACGGCCATTTCAACCCCTTCATGGGGATATGATTTGAACCTTCTTTCTCATGCC  
GCGAGTCATGTCGCTCTTGAGGGACAACAAGAAAGTCTAGAGACTCTTCGGAAGCCTTCGCAAAACATTCAA  
GCGCCGCCGCCGCCGCCGCCGCTTTCTCATATACCAGAAAAGAGGGATCACTGATAACTATGGTGTGAGCCT  
TCGATTCTAGACCTTACAGATTTAGGTGATCCGGTTCAGGACTTTACCGTCTTCCTAGAAAGCGTCGATCTC  
TCTTCGGACTGGGACTCCGGCATCTTCTCTAGTGTAGAAGAGCCCTTATTGCCAACTAGCCTACCCATGGAC  
TCGAAACCCCCAGCCCGTGAGAGTTCCAGGCTGGGCATGACGGAGAACCACACCCCTTCTACTACGCAGCCG  
ACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATCCAAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCG  
ACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCCCCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGC  
CAGTGGGTGGTTGCACGGAGAAGTCCCCACTGCCGAGTCTCTATATGAGCATGTTTGCGAGCGTCATGTT  
GGACGTAAAAGCACCAACAACCTCAACCTGACCTGCCAGTGGGGCACTTGCAACACCACAACAGTCAAGCGT  
GATCATATCACCTCCACATCCGCGTTCATGTGCCACTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCT  
TTCAAGCGCCCCAGGATTTGAAGAAGCATGTCAAGACTCATGCGGACGACTCCGAGATCCGCTCCCCGAA  
CCGGGCATGAAGCACCTGATATGATGTTCCCCCAAAACCTAAGGGTTACGCTGCTGCCACACATTACTTC  
GAAAGCCCTATCAACGGCATCAATGGG

#### SEQ ID NO. 131

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
APPPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVDLSSDWDGIFSSVEEPLLPSTSLPMD  
SKPPARESSRLGIDTSLYKKAGSTMENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNA  
PSMNGAGEQLPCQWVGCTEKSPTAESLYEHVCRHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP  
LKPHKCDFCGKAFKRPQDLKKHVKTHADDSEIRSPEPGMKHPDMMFPQNPKGYYAAATHYFESPINGING

#### SEQ ID NO. 132

MLELVDAIPLQTQPVPPAPEVQVQPPPIVETAHFNPSWGYDLNLLSHAASHVALEGQQESLETLRKPSQNIQ  
APPPPPPLSHIPERGITDNYGVEPSILDLDLGDVPQDFTVFLESVDLSSDWDGIFSSVEEPLLPSTSLPMD  
SKPPARESSRLGMTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNAPSMNGAGEQLPC  
QWVGCTEKSPTAESLYEHVCRHVGRKSTNNLNLTCQWGTCTNTTTVKRDHITSHIRVHVP  
FKRPQDLKKHVKTHADDSEIRSPEPGMKHPDMMFPQNPKGYYAAATHYFESPINGING

#### SEQ ID NO. 133

ATGACGGAGAACCACACCCCTTCTACTACGCAGCCGACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATC  
CAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCGACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCC  
CCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGCCAGTGGGTGGTTGCACGGAGAAGTCCCCACTGCC  
GAGTCTCTATATGAGCATGTTTGCGAGCGTCATGTTGGACGTAAAAGCACCAACAACCTCAACCTGACCTGC  
CAGTGGGGCACTTGCAACACCACAACAGTCAAGCGTGATCATATCACCTCCACATCCGCGTTCATGTGCCA  
CTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCTTTCAAGCGCCCCAGGATTTGAAGAAGCATGTCAAG  
ACTCATGCGGACGACTCCGAGATCCGCTCCCCGAACCGGGCATGAAGCACCTGATATGATGTTCCCCCAA  
AACCTAAGGGTTACGCTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGGGGATCTACC  
GCCCCCATTACCGACGTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGGGGATCTACC  
GACGCGCTAGACGATTTGATCTGGACATGTTGGGGGACGGGGATTCCCCGGTCCGGGATTTACCCCCAC

GACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGAGCAGATGTTTACCGATGCCCTGGGC  
ATTGACGACTTTGGGGGA

**SEQ ID NO. 134**

ATGACGGAGAACCACACCCCTTCTACTACGCAGCCGACGTTGCCTGCGCCTGTTGCTGAAGCCGCGCCGATC  
CAAGCAAACCCGGCTCCTTCTGCCTCAGTCACGGCGACTGCTGCCGCCGCTACTGCGGCGGTGAACAACGCC  
CCCTCTATGAACGGCGCCGGTGAGCAGTTGCCTTGCCAGTGGGTGGTTGCACGGAGAAGTCCCCCACTGCC  
GAGTCTCTATATGAGCATGTTTTCGAGCGTCATGTTGGACGTAAAAGCACCAACAACCTCAACCTGACCTGC  
CAGTGGGGCACTTGCAACACCACAACAGTCAAGCGTGATCATATCACCTCCCACATCCGCGTTCATGTGCCA  
CTTAAGCCGCACAAATGCGACTTTTGTGGTAAGGCTTTCAGCGCCCCCAGGATTTGAAGAAGCATGTCAAG  
ACTCATGCGGACGACTCCGAGATCCGCTCCCCCGAACCGGGCATGAAGCACCTGATATGATGTTCCCCCAA  
AACCTAAGGGTTACGCTGCTGCCACACATTACTTCGAAAGCCCTATCAACGGCATCAATGGGACCGCCCCC  
ATTACCGACGTCAGCCTGGGGGACGAGCTCCACTTAGACGGCGAGGACGTGGCGATGGCGCATGCCGACGCG  
CTAGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGTCCGGGATTTACCCCCACGACTCC  
GCCCCCTACGGCGCTCTGGATATGGCCGACTTCGAGTTTGAGCAGATGTTTACCGATGCCCTGGGCATTGAC  
GACTTTGGGGGA

**SEQ ID NO. 135**

MTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNAPSMNGAGEQLPCQWVGCTEKSPTA  
ESLYEHVCERHVGRKSTNNLNLTQWGTCTNTTTVKRDHITSHIRVHVPLKPHKCDFCGKAFKRPQDLKHHVK  
THADDSEIRSPEPGMKHPDMMFPQNPKGYYAAATHYFESPINGINGGSTAPITDVSLGDELHLDGEDVAMAH  
DALDDFDLMDLGDGDSPPGFTPHDSAPYGALDMADFEFEQMFTDALGIDDFGG

**SEQ ID NO. 136**

MTENHTPSTTQPTLPAPVAEAAPIQANPAPSASVTATAAAATAAVNNAPSMNGAGEQLPCQWVGCTEKSPTA  
ESLYEHVCERHVGRKSTNNLNLTQWGTCTNTTTVKRDHITSHIRVHVPLKPHKCDFCGKAFKRPQDLKHHVK  
THADDSEIRSPEPGMKHPDMMFPQNPKGYYAAATHYFESPINGINGTAPITDVSLGDELHLDGEDVAMAHADA  
LDDFDLMDLGDGDSPPGFTPHDSAPYGALDMADFEFEQMFTDALGIDDFGG

**SEQ ID NO. 137**

ATGGTTAAAGAGAGTATTATTGCTCTTGCTGAGCATGCGGCCTCCAGAGCCTCAAGAGTTATTCTCCAGTG  
AAGCTAGCCTATAAAATATGCTTAAGGACCTTCCTCCAAGTACAAGCCATTTAACGCTCCAAGCTATCT  
AATAGAAAGTGGCCGATAACCGGATCACGAGGGCTCCTCGTTATCAACAGATTTGAGAGATGGTAAC  
CAATCTCTGCCGGATCCCATGTGAGTGAACAAAAGAAAGAAATACTTTTACAAAGCTGGTCAATATTGGGTTT  
AAAGAAATCGAGGTTTCTTCCCTCTGCATCTCAAACAGATTTTCGACTTCACTAGATATGCTGTAGAAAAC  
GCCCCAGACGATGTTAGTATTCAATGTCTTGTCCAATCTAGAGAACACTTGATTAAGAGAACGGTGAAGCA  
TTAACAGGTGCTAAAAAGGCTACTATACATACTTACTTGGCAACAAGTGATATGTTCCGTGAAATTGTTTTT  
AATATGTCTAGAGAGGAAGCTATTTCCAAGGCAGTAGAGGCCACCAAACTAGTTAGGAACTAACTAAGGAT  
GACCTTTCCTCAACAAGCCACTCGTTGGTCTATGAGTTTCCCCGAATGTTTCAGTGATACTCCAGGTGAA  
TTTGCTGTAGAAATTTGCGAAGCTGTTAAGAAGGCTTGGGAACCTACCGAGGAAAATCCAATCATTTTCAAC  
TTACCTGCTACCGTAGAAGTTGCCTCTCCAAATGTTTATGCTGATCAGATTGAATACTTCGCTACCCATATT  
ACTGAGCGTGAGAAGGTTTGCATCTCTACACATGTCACAATGACCGTGTTGCGGTGTCGCCGCCACAGAG  
TTAGGTATGCTTGCAGGTGCCGACCGTGTAGAAGGATGTCCTTTGGTAATGGTGAACGTACAGGTAATGTG  
GACTTGGTTACTGTTGCTATGAATATGTATACCAAGGTGTTTCTCCTAATTTGGATTTCTCTGACTTGACC  
TCTGTCTAGATGTGGTTGAGCGTTGTAATAAGATCCCAGTATCGCAAAGAGCACCATACGGCGGTGACTTG  
GTCGTTTGTGCCTTTTCCGGTTCTCACCAGACGCCATTAAGAAGGGTTTCAACTTACAAAACAAGAAGCGT  
GCTCAAGGTGAACTCAATGGAGAAATCCCATACTTGCCATTGGATCCAAAGGACATTGGCCGTGATTACGAA  
GCTGTATCAGAGTCAACTCTCAGTCTGGTAAAGGTGGTGCCGCTTGGGTATTTTGGATCTTTGGGTTTG  
GATCTACCAAGAAACATGCAATCGAATTTTCTAGCGCCGTTCAGACCATGCTGACTCCTTGGGTAGAGAA  
CTAAATCAGATGAGATTTTCAAGTTATTCAAAGAGGCTTACAATAAATGACGAACAGTACCAAGCTATT  
AGTTTAGTCAATTATAATGTTGAAAAATTCGGCACTGAAAGTGAAGTGTTCAGTGGTCAAGTCAAAGTAGGC  
GACCAGATCCTCTACGCCGACGCATCGTGGCCGGCATCACCGCGCCACAGGTGCGGTTGCTGGCGCCTAT  
ATCGCCGACATACCGATGGGGAAGATCGGGCTCGCCACTTCGGGCTCATGAGCGCTTGTTCGGCGTGCGGT  
ATGGTGGCAGGCCCCGTGGCCGGGGGACTGTTGGGCGCCATCTCCTTGATGCACCATTCCTTGCGGCGGCG  
GTGCTCAACGGCCTCAACCTACTACTGGGCTGCTTCTAATGCAGGAGTCGCATAAGGGAGAGCGTCGACCG

ATGCCCTTGAGAGCCTTCAACCCAGTCAGCTCCTTCCGGTGGGCGCGGGGCATGACTATCGTCGCCGCACTT  
 ATGACTGTCTTCTTTATCATGCAACTCGTAGGACAGGTGCCGGCAGCGCTCTGGGTCATTTTCGGCGAGGAC  
 CGCTTTTCGCTGGAGCGCGACGATGATCGGCCTGTCGCTTGCAGGATTCGGAATCTTGACAGCCCTCGCTCAA  
 GCCTTCGTCACTGGTCCCGCCACCAAACGTTTCGGCGAGAAGCAGGCCATTATCGCCGGCATGGCGGCCGAC  
 5 GCGCTGGGCTACGTCTTGCTGGCGTTCGCGACGCGAGGCTGGATGGCCTTCCCCATTATGATTCTTCTCGCT  
 TCCGGCGGCATCGGGATGCCCGGCTTGCCAGGCCATGCTGTCCAGGCAGGTAGATGACGACCATCAGGGACAG  
 CTTCAAGGATCGCTCGCGGCTCTTACCAGCCTAACTTCGATCACTGGACCGCTGATCGTCACGGCGATTAT  
 GCCGCCTCGGCGAGCACATGGAACGGGTTGGCATGGATTGTAGGCGCCGCCCTATACCTTGTCTGCCTCCCC  
 10 GCGTTGCGTCGCGGTGCATGGAGCCGGGCCACCTCGACC

**SEQ ID NO. 138**

MVKESIIALAEHAASRASRVIPVKLAYKNMLKDPSSKYKPFNAPKLSNRKWPDNRITRAPRWLSTDLRDGN  
 QSLPDPMSVEQKKEYFHKLVNIGFKEIEVSFSPASQTDFTTRYAVENAPDDVSIQCLVQSREHLIKRTVEA  
 LTGAKKATIHTYLATSDMFREIVFNMSREEAISKAWEATKLVRKLTKDDPSQQATRWSYEFSSPECFSDTPE  
 15 FAVEICEAVKKAWEPTEENPIIFNLPATVEVASPNVYADQIEYFATHITEREKVCISTHCHNDRGCGVAATE  
 LGMLAGADRVEGCLFGNGERTGNVDLVTVAMNMYTQGVSPNLDFSDLTSVLDVVERCNKIPVSQRAPYGGDL  
 VVCAFSGSHQDAIKKGFNLQNKRAQGETQWRIPYLPDPKDIGRDYEAVIRVNSQSGKGGAAWVILRSLGL  
 DLPRNMQIEFSSAVQDHADSLGRELKSDEISKLFKEAYNYNDEQYQAIISLVNYNVEKFGTERRVFTGQVKVG  
 DQILYAGRIVAGITGATGAVAGAYIADITDGEDRARHFGLMSACFVGVMVAGPVAGGLLGAISLHAPFLAAA  
 20 VLNLNLLLGCFLMQESHKGERRPMLRAFNPVSSFRWARGMTIVAALMTVFFIMQLVGQVPAALWVIFGED  
 RFRWSATMIGLSLAVFGILHALAQAFVTGPATKRFGEKQAIAGMAADALGYVLLAFATRGWMAFPIMILLA  
 SGGIGMPALQAMLSRQVDDDHQQLQGSALAALTSITSITGLIVTAIYAASASTWNGLAWIVGAALYLVCLP  
 25 ALRRGAWSRATST